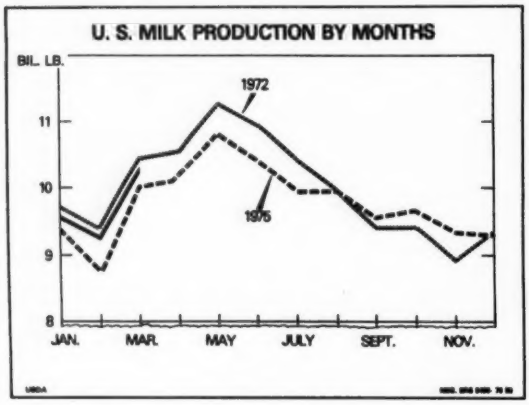
DS-360 MAY 1976

DAIRY Situation

ECONOMIC RESEARCH SERVICE U.S. DEPARTMENT OF AGRICULTURE



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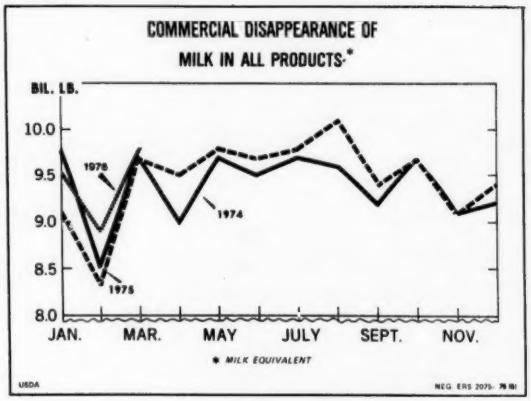

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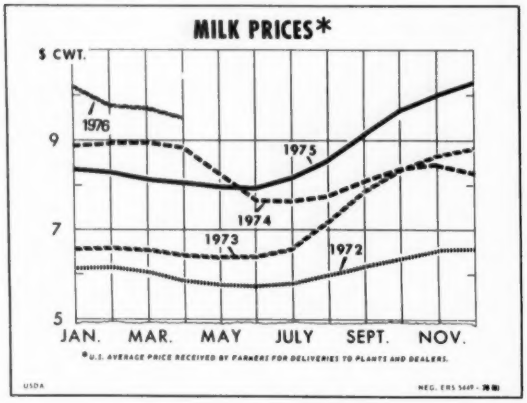

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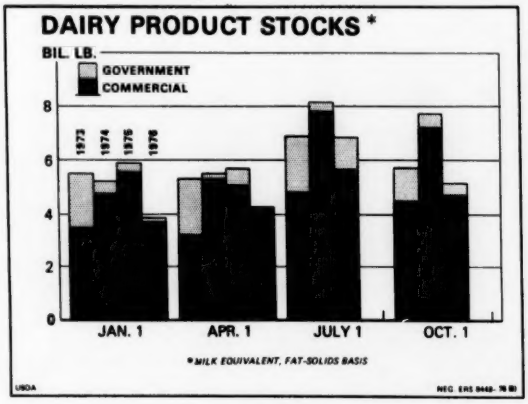

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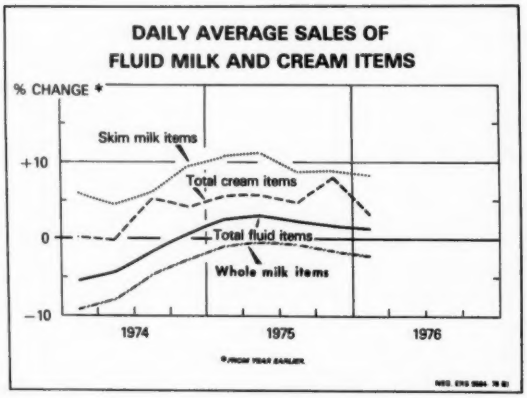

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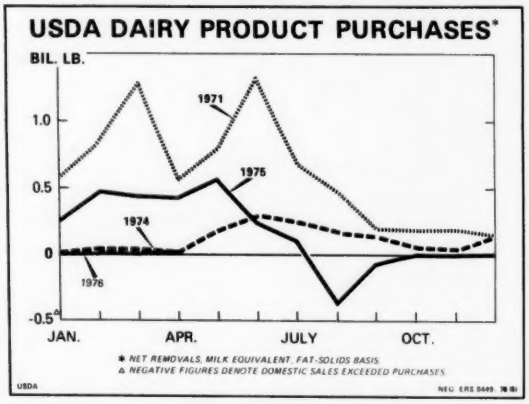

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Principal Contributors:
James J. Miller
Charles N. Shaw

Economic Research Service
U.S. Department of Agriculture
Washington, D.C. 20250

SUMMARY

Continued expansion in milk production is probable for the rest of 1976 since milk-feed price relationships are expected to remain favorable to heavier concentrate feeding. Although pressures for greater herd culling are building, the declines from a year earlier in milk cow numbers likely will remain modest. Total 1976 milk output could exceed 1975's 115.5 billion pounds by around 2 billion pounds. The gain could be larger or smaller depending on cull cow prices, milk prices, feed costs, or developments in the general economy.

Widespread increases in March milk production brought first quarter output to 29.0 billion pounds, up almost 2 percent from 1975, on a daily average basis, and the largest production in 4 years. Milk cow numbers in March were down only 1 percent from last year and unchanged from February. Although the decline from a year earlier was slightly faster than in early 1975, it remained slow compared with earlier years.

Milk production per cow in March was up more than 3 percent, the sharpest year-to-year gain since September 1974. Increases in output per cow have been induced by heavier grain feeding this year. Farmers reported feeding 5 percent more grain and other concentrates on April 1 than a year ago.

Farmers received an average $9.48 per hundred pounds of milk in April, 82 cents below the December peak but $1.34 above last April. The average milk price was buttressed by a counter-seasonal rise since February in manufacturing milk prices, reflecting the higher wholesale butter and cheese prices.

Farm milk prices likely will decline in the face of strong flush season milk production but will average 10-15 percent above a year earlier during the flush. Milk prices could post a fairly strong seasonal rise during the second half of 1976, but the increases are unlikely to match 1975's rapid rise.

The *Dairy Situation* is published in March, May, July, September, and December

Cash receipts from dairying were up almost a fourth during January-March due to much higher prices and larger marketings. Last year, dairy income was almost $9.9 billion, up 5 percent from 1974.

Wholesale butter and cheese prices have been rather unsettled since the first of the year. After strengthening counter-seasonally from February, butter and cheese prices were above support purchase prices in early May. Nonfat dry milk prices were close to support levels and small net purchases have been made.

Prices of milk and dairy products at retail declined slightly in March, as declines in the prices of manufactured products offset slight increases in the fluid products. However, March retail prices were up 8 percent from a year ago and the average for all of 1976 likely will be 6-8 percent above 1975.

Cheese production continued to pull milk away from butter-powder operations in recent months, as well as absorbing most of the increase in milk supplies available for manufacturing. American cheese output was up about 17 percent from a year ago in the first 3 months of 1976, while butter production was down about 5 percent and nonfat dry milk output was down almost a fifth. Cheese production probably will continue to attract more milk in coming months.

First quarter sales of dairy products were up almost 3 percent from a year earlier due to strong cheese sales and small gains in fluid milk sales. Fluid milk and butter sales may slip below year-earlier levels in coming months but cheese sales likely will remain strong.

Commercial dairy stocks have recovered somewhat from last winter's low levels but the strong sales have kept commercial holdings rather tight. The 4.2 billion pounds milk equivalent in commercial hands on April 1 was down 17 percent from 1975, with butter and American cheese stocks down a fifth.

U.S. trade in dairy products was minor in January-March with both imports and exports at moderate levels. However, USDA recently announced that 300 million pounds of nonfat dry milk has been programmed for donation under the Food for Peace program (PL 480) during the 18 months ending September 30, 1977. Elsewhere in the world, milk production was up in most major producing countries in early 1976 and could considerably exceed the earlier forecast for a 1-percent rise from a year ago during 1976.

DAIRY SITUATION

SITUATION AND OUTLOOK

PRODUCTION

Milk Output Rising

Milk production in March was more than 2 percent above a year ago, the sixth straight month of increases from a year earlier. The increases in milk output per cow, reflecting heavier concentrate feeding, were only partially offset by the relatively slow declines in milk cow numbers. First quarter 1976 production totaled 29.0 billion pounds, up almost 2 percent from 1975, on a daily average basis, and the largest production in 4 years.

Milk production per cow was up more than 3 percent in March, the sharpest year-to-year increase since September 1974. Much of the gain was triggered by much more attractive milk-feed price relationships this year, which led to continued heavier grain feeding. Farmers reported feeding 5 percent more grain and other concentrates on April 1 than a year ago. Milk cow numbers in March were down only 1 percent from last year and unchanged from a month earlier. Although this year's decline from a year earlier was slightly faster than in early 1975, it remained slow compared with earlier years.

The March gains in milk output were quite widespread. All production regions showed increases, ranging from a slight rise in the Corn Belt to a more than 4-percent gain in the Pacific region. The important Lake States and Northeast regions rose 3 and 2 percent, respectively. Of the 5 major dairy States, California, New York, and Wisconsin were well above 1975 in March, while Pennsylvania was unchanged. Minnesota was barely above a year ago, the first such gain since September 1974. Only 5 of the 34 States that report monthly produced less milk than last March.

1976 Production To Be Large

Milk production for 1976 probably will be above 1975 but the size of the increase will be affected by many factors:

(1) The increase in the support price for milk will ensure farm milk prices 10-15 percent above a year earlier this spring. Fairly strong seasonal rises are expected later in the year.

(2) Although feed prices will be quite sensitive to weather and other new-crop developments, feed prices are not likely to change sharply in coming months.

(3) Milk-feed price relationships this summer and fall likely will remain much more favorable than a year ago but below the levels of late 1975.

(4) Non-feed production costs are expected to continue to rise during the rest of 1976.

(5) Dairy replacement numbers were high at the start of the year.

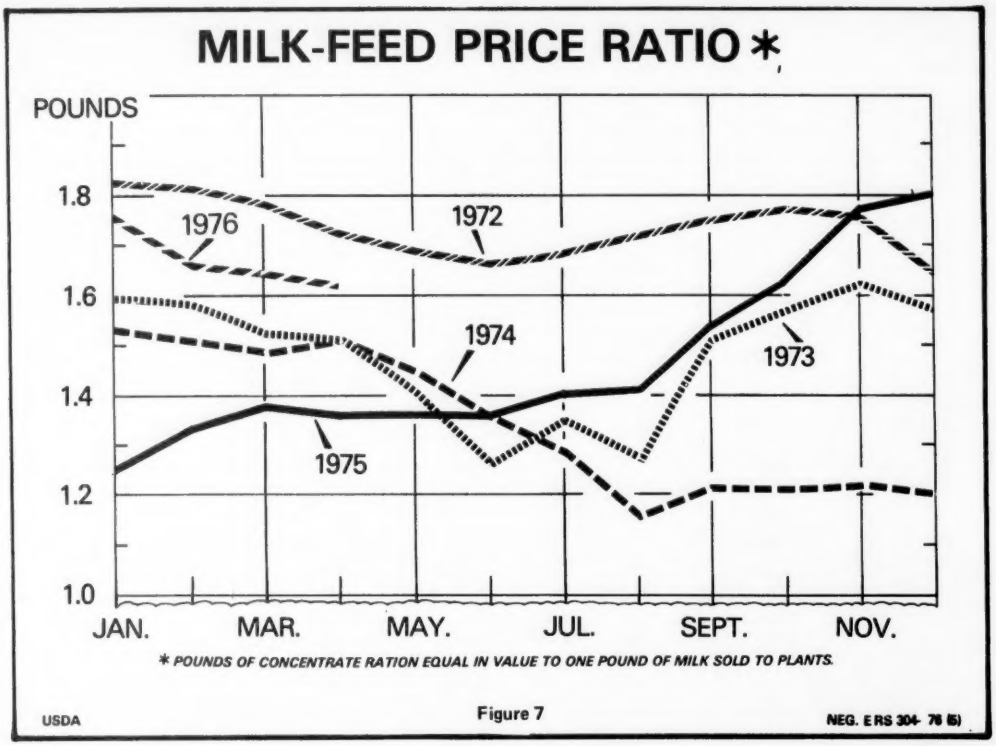
(6) Slaughter cow prices this spring have been much higher than 1975 with Utility cows at Omaha quoted at about $31 per 100 pounds in early May, up about $8 from last year.

(7) Economic alternatives for dairymen are improving but only at a slow rate. Economic recovery has improved off-farm opportunities slightly and other livestock enterprises are more attractive this year.

Continued expansion in milk production is probable for the rest of 1976. Although the outlook for feed prices during the second half is still very tentative, milk-feed price relationships likely will favor the continuation of heavier grain feeding, which started during the second half of 1975. In addition, gains in output per cow due to improved genetic potential and management may not have been realized in recent years because of limited feeding. Pressures for heavier herd culling have

Utility cow prices, Omaha

Month	1974	1975	1976
	Dollars per cwt.	*Dollars per cwt.*	*Dollars per cwt.*
January	31.45	16.82	23.26
February	32.65	18.18	25.90
March	31.76	19.45	27.45
April	30.49	21.67	30.72
May	27.67	23.55	
June	26.39	23.32	
July	24.22	22.00	
August	24.54	21.29	
September	22.56	22.45	
October	19.68	22.01	
November	17.62	20.73	
December	17.67	21.64	
Average	25.56	21.09	



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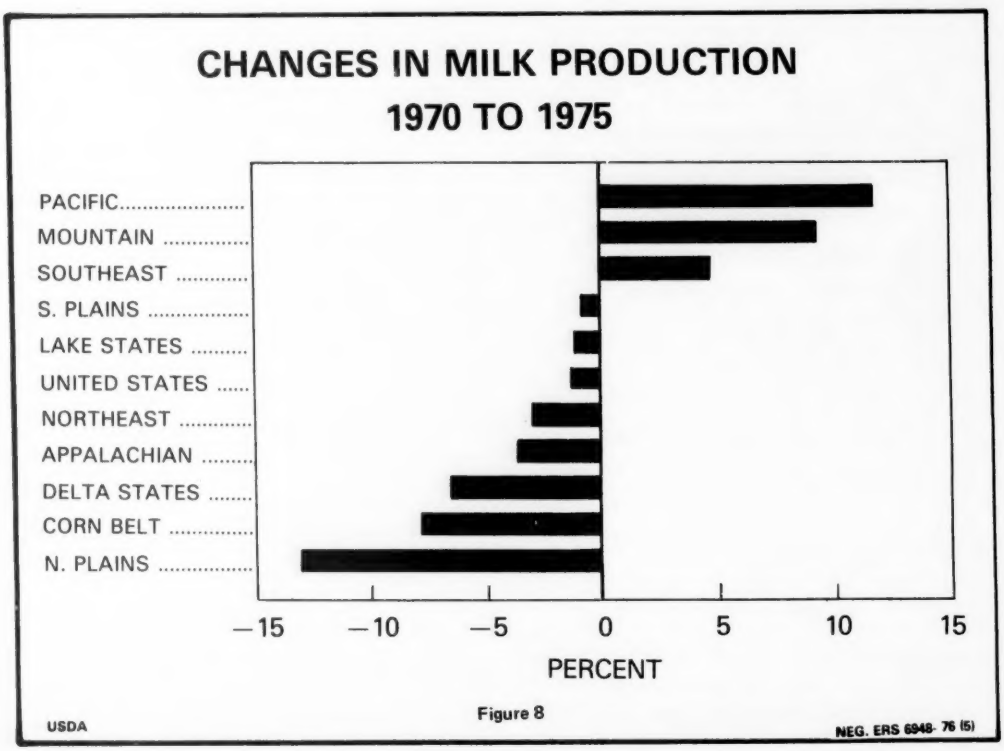

Figure 8

been slowly building and some acceleration in culling could start in coming months, but rapid increases are not expected. Large numbers of replacement heifers likely will be a significant bolstering factor.

Total 1976 milk production could exceed 1975's 115.5 billion pounds by around 2 billion pounds, if milk prices show expected seasonal strength and feed prices do not rise sharply. Under the most favorable price conditions, production could go even higher. On the other hand, gains in milk output could slow in the second half of the year if dairy sales weaken greatly and limit seasonal milk price rises or if feed prices surge.

Feed Prices Stable

Dairy feed prices have been quite stable thus far in 1976. Farmers paid an average $135 per ton for 16 percent protein dairy ration in April, down $1 from January and up just slightly from a year ago. Corn and soybean meal prices have also been fairly stable. In early May, corn at Chicago was about $2.75 per bushel, down slightly from a year ago, and soybean meal at Decatur was about $130 per ton, up about $10 from a year earlier.

Feed prices in coming months will be heavily influenced by new-crop developments. As of April 1, farmers intended to plant 6 percent more acres to corn than last year's large acreage. If this acreage is actually planted and yields fall within a normal range, corn prices likely will decline somewhat during the second half of 1976. On the other hand, farmers intended to plant 10 percent fewer acres of soybeans this year and soybean meal prices may rise later this year. Feed prices in coming months will be influenced by export and domestic feeding demand as well as weather and other factors affecting output.

The milk-feed price ratio (pounds of feed equal in value to a pound of milk) stood at about 1.6 in April, down from December's 1.8 but well above the 1.3 of a year earlier (figure 7). The difference in value between 100 pounds of milk and 100 pounds of concentrate ration was $3.61, up from $1.89 last April. Milk-feed price relationships probably will slip further as milk prices move toward the seasonal low but will be much more favorable than last year.

Marketings Unchanged in 1975

Farmers marketed 112.2 billion pounds of milk in 1975, virtually unchanged from 1974's 112.3 billion pounds (table 1). Whole milk sold to plants and dealers accounted for over 98 percent of total marketings in 1975 and about 1½ percent represented milk sold directly to consumers. Less than 0.4 billion pounds of milk were marketed as farm-separated cream last year compared with almost 8 billion pounds fifteen years ago.

Milk-feed price ratio[1]

Month	1974	1975	1976
	Pounds	*Pounds*	*Pounds*
January	1.53	1.25	1.75
February	1.51	1.33	1.66
March	1.49	1.38	1.64
April	1.51	[2]1.30	1.62
May	1.45	1.36	
June	1.36	1.36	
July	1.29	1.40	
August	1.16	1.41	
September	1.22	1.54	
October	1.21	1.62	
November	1.23	1.77	
December	1.20	1.80	
Average	1.35	1.46	

[1] Pounds of concentrate ration equal in value to 1 pound of milk. [2] Revised.

Although total U.S. marketings about equalled 1974, considerable differences existed among production regions. The almost 2-percent gains from a year earlier in the Northeast and Pacific regions were the strongest but marketings also rose in the Southeast, Appalachian, and Mountain regions. Minnesota's sharp drop pulled the Lake States down slightly and favorable cash grain alternatives probably were important in the small Corn Belt decline and the 5-percent fall in the Plains States. The 5 major dairy States of Wisconsin, California, New York, Minnesota, and Pennsylvania marketed almost 49 percent of the U.S. total last year, up from about 47 percent in 1970.

Farm milk use continued to slip slightly in 1975. Since there were fewer dairy farms, farm households used less home-produced milk last year. Partially offsetting this decline was a slight increase in the amount of milk fed to calves. Total farm milk use was less than 3 percent of milk production compared with over 7 percent in 1960.

The proportion of milk production that was eligible for fluid use (Grade A) continued to increase last year. About 80 percent of the milk that farmers sold to plants and dealers was fluid grade, compared with 74 percent in 1970 and only 67 percent in 1960 (figure 9). Farmers have been encouraged to convert to Grade A production by fluid grade milk prices well above prices for manufacturing grade milk and by the smaller difference in sanitation standards between the two grades. Also, the added cost (per 100 pounds of milk) of producing Grade A milk is less as herd size is

Table 1--Milk used and marketed by farmers, United States, specified years, 1960-75

Year	Milk used on farms where produced				Milk marketed by farmers				Total milk production on farms 1/
					Sold to plants and dealers				
	Fed to calves 1/	As fluid milk or cream	For farm-churned butter	Total 2/	As whole milk	As farm-skimmed cream	Sold directly to consumers 3/	Total 2/	
	Billion pounds								
1960	2.5	5.3	1.3	9.2	103.9	7.9	2.1	114.0	123.1
1961	2.4	4.8	1.1	8.4	108.4	6.9	2.1	117.3	125.7
1962	2.3	4.4	.9	7.7	110.7	5.9	2.0	118.6	126.3
1963	2.2	4.1	.7	7.1	111.2	5.1	1.9	118.1	125.?
1964	2.2	3.7	.6	6.5	114.2	4.4	1.9	120.5	127.0
1965	2.1	3.4	.5	6.0	112.7	3.7	1.8	118.2	124.2
1966	2.0	3.1	.4	5.5	109.7	3.0	1.7	114.4	119.9
1967	1.9	2.9	.3	4/ 5.2	109.4	2.4	1.8	113.6	118.7
1968	1.8	2.6	.2	4.7	108.8	2.0	1.8	112.6	117.2
1969	1.7	2.4	.2	4.3	108.5	1.6	1.7	111.8	116.1
1970	1.7	2.2	.1	4.0	110.0	1.2	1.7	113.0	117.0
1971	1.6	5/ 2.1	N.A.	3.7	112.2	1.0	1.6	114.8	118.5
1972	1.6	5/ 1.9	N.A.	3.6	114.0	.8	1.5	116.3	119.9
1973	1.6	5/ 1.8	N.A.	3.4	109.8	.7	1.5	112.0	115.4
1974	1.6	5/ 1.7	N.A.	3.3	110.3	.4	1.5	112.3	115.6
1975 6/	1.6	5/ 1.7	N.A.	3.2	110.3	.4	1.5	112.2	115.5
	As a percentage of total milk production								
	Percent								
1960	2.0	4.3	1.1	7.4	84.4	6.4	1.7	92.6	100.0
1961	1.9	3.8	.9	6.7	86.2	5.5	1.7	93.3	100.0
1962	1.8	3.5	.7	6.1	87.6	4.7	1.6	93.9	100.0
1963	1.8	3.3	.6	5.7	88.8	4.1	1.5	94.3	100.0
1964	1.7	2.9	.5	5.1	89.9	3.5	1.5	94.9	100.0
1965	1.7	2.7	.4	4.8	90.7	3.0	1.4	95.2	100.0
1966	1.7	2.6	.3	4.6	91.5	2.5	1.4	95.4	100.0
1967	1.6	2.4	.3	4.4	92.2	2.0	1.5	95.7	100.0
1968	1.5	2.2	.2	4.0	92.8	1.7	1.5	96.1	100.0
1969	1.5	2.1	.2	3.7	93.5	1.4	1.5	96.3	100.0
1970	1.5	1.9	.1	3.4	94.0	1.0	1.5	96.6	100.0
1971	1.4	1.8	N.A.	3.1	94.7	.8	1.4	96.9	100.0
1972	1.3	1.6	N.A.	3.0	95.1	.7	1.3	97.0	100.0
1973	1.4	1.6	N.A.	2.9	95.1	.6	1.3	97.1	100.0
1974	1.4	1.5	N.A.	2.9	95.4	.3	1.3	97.1	100.0
1975 6/	1.4	1.5	N.A.	2.8	95.5	.3	1.3	97.1	100.0

1/ Excludes milk sucked by calves. 2/ May not add due to rounding. 3/ By producers who sell only milk from their own herds. Also includes milk produced by institutional herds. 4/ Includes some milk used for other purposes on farms or not utilized. 5/ Includes farm-churned butter. 6/ Preliminary.

Table 2—Fluid grade milk as percent of all milk sold by farmers to plants and dealers, 1950-75[1]

Year	Atlantic		North Central		South Central	Western	United States
	North	South	West	East			
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
1950	97	83	37	44	62	59	61
1955	98	87	34	48	67	64	63
1960	99	90	31	55	73	74	67
1965	99	93	28	60	78	82	69
1966	99	94	28	61	80	84	69
1967	99	94	29	60	80	84	70
1968	99	94	31	62	81	84	70
1969	99	95	35	66	83	85	73
1970	99	96	38	68	84	85	74
1971	99	96	41	69	86	85	76
1972	99	96	43	71	86	85	77
1973	99	97	44	71	88	86	77
1974	99	98	46	73	89	88	79
1975	99	98	48	73	90	88	80

[1] Percentage eligible for fluid use (Grade A in most States). Includes fluid grade milk used in manufactured products.

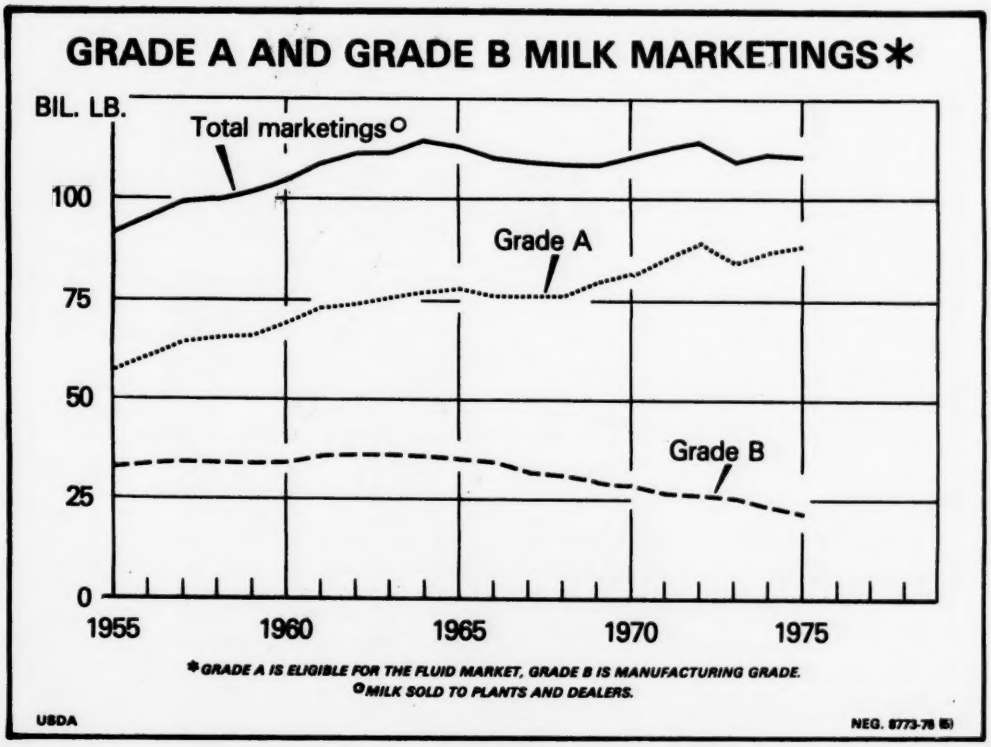

Figure 9

increased. The most dramatic shift to Grade A has occurred in the West North Central States. However, a majority of milk in this region is still Grade B (table 2).

Only 22 billion pounds of manufacturing grade milk were sold last year, a drop of over 6 billion pounds from 1970. Over 14 billion pounds of last year's total was in Wisconsin, Minnesota, and Iowa. While Grade B output in these 3 States has declined, their proportion of the U.S. total has held at just over three-fifths. Almost 88 percent of the manufacturing grade milk sold in 1975 came from only 10 States.

Manufacturing grade milk marketed

State	1965	1970	1975
	Billion pounds	*Billion pounds*	*Billion pounds*
Wisconsin	10.3	8.2	7.2
Minnesota	8.2	6.6	4.8
Iowa	3.8	2.9	2.1
Missouri	1.5	1.0	1.0
South Dakota	1.0	1.1	1.0
Idaho	1.0	1.0	.9
Nebraska	.7	.8	.7
California	.9	.9	.7
Kentucky	1.1	.8	.5
Illinois	1.2	.7	.5
United States	34.9	28.6	22.1

PRICES AND INCOME

Farm Milk Prices Off From December

Farm milk prices have dropped considerably from their December peaks. In April, farmers received an average $9.48 per 100 pounds, down 82 cents from December but up $1.34 from last April.

After falling sharply during December-February, manufacturing grade milk prices strengthened counter-seasonally with April averaging $8.56 per 100 pounds. This was up 11 cents from February, on the basis of higher butter and cheese prices, and up $1.49 from a year ago but down 69 cents from December. Adjusted to the annual average fat test, manufacturing milk prices in April were 46 cents above the $8.13 support level.

Milk prices received by farmers

Month	All sold to plants			Manufacturing grade		
	1974	1975	1976	1974	1975	1976
	Dollars per 100 pounds					
January	8.89	8.37	10.20	8.13	7.00	9.07
February	8.92	8.32	9.79	8.15	7.04	8.45
March	8.96	8.18	9.72	8.14	7.02	8.53
April	8.84	8.14	9.48	7.75	7.07	8.56
May	8.26	8.03		6.87	7.07	
June	7.69	7.97		6.42	7.10	
July	7.62	8.23		6.31	7.30	
August	7.75	8.60		6.46	7.62	
September	8.08	9.22		6.81	8.24	
October	8.35	9.69		7.03	8.75	
November	8.49	9.99		7.02	8.99	
December	8.27	10.30		6.74	9.25	
Average	8.33	8.71		7.13	7.62	

In March, American cheese plants paid about a 15 cents more than butter-powder plants for milk of equivalent fat test. The wholesale cheese market was relatively stronger than the other markets during the first quarter of 1976 and this enabled cheese producers to pay more for milk. Cheese plants probably will pay more through the flush season since the support purchase price for cheese is relatively higher than the prices for butter and nonfat dry milk. However, butter-powder plants likely will move into a more competitive position this summer.

Minimum Class I prices in Federal order markets will average $10.53 per 100 pounds in June, up $1.49 from last June but down 64 cents from the February peak. These changes reflect movements in the Minnesota-Wisconsin price, the basic formula price in Federal order markets.

After dropping to a level of less than 10 cents per hundredweight in February, estimated over-order payments on Class I milk increased in recent months, reaching an average of approximately 50 cents per hundredweight during April. The increase was a result of over-order prices negotiated by cooperatives holding steady or not decreasing by as much as the decline in minimum Federal order Class I prices (minimum Federal order Class I prices are based on the Minnesota-Wisconsin price for the second preceding month). With the 35 cents-per-hundredweight increase in Federal order minimum Class I prices from April to May, the level of over-order payments is expected to decline somewhat.

Farm milk prices likely will decline as milk production peaks seasonally but will average 10-15 percent above a year earlier during flush. The recent strength in manufacturing milk prices is unlikely to hold in the face of strong flush production. Farm milk prices could post a fairly strong seasonal rise during the second half of 1976 if milk output does not exceed recent gains and dairy sales do not fall dramatically. However, the seasonal price increases are unlikely to match 1975's rapid pace.

Table 3.--Manufacturing milk and milkfat in farm-separated cream: Comparisons of announced support prices and United States average market prices paid to producers, marketing years, 1957-76

Marketing year beginning April 1	Manufacturing milk					Milkfat				
	Support level		Average market level			Support level		Average market level		
	Percentage of parity equivalent 1/	Price per 100 pounds	Price per 100 pounds	As a percentage of parity equivalent: In month prior to marketing year	As a percentage of parity equivalent: Average during marketing year	Percentage of parity 1/	Price per pound	Price per pound	As a percentage of parity: In month prior to marketing year	As a percentage of parity: Average during marketing year
	Percent	Dollars	Dollars	Percent	Percent	Percent	Cents	Cents	Percent	Percent
1957	82	3.25	3.28	83	82	79	58.6	60.3	82	81
1958	75	3.06	3.16	77	77	75	56.6	59.1	78	78
1959	77	3.06	3.22	81	81	77	56.6	60.7	82	82
1960	76	2/ 3.06				76	2/ 56.6			
	80	3/ 3.22				80	3/ 59.6			
	85	4/ 3.40	3.31	83	83	82	4/ 60.4	61.1	82	83
1961	83	3.40	3.38	83	83	81	60.4	61.7	82	82
1962	75	3.11	3.19	77	76	75	57.2	59.1	78	77
1963	75	3.14	3.24	78	77	75	58.1	59.6	77	77
1964	75	3.15	3.30	79	78	75	58.0	60.4	78	77
1965	75	3.24	3.45	80	79	75	59.4	62.1	78	77
1966	78	3.50				75	61.6			
	89.5	5/ 4.00	4.11	92	90	83	68.0	68.6	84	82
1967	87	4.00	4.07	88	87	81	68.0	68.2	81	80
1968	89.4	4.28	4.30	90	87	77	66.0	68.6	80	77
1969	83	4.28	4.55	88	86	75	68.6	69.6	76	74
1970	85	4.66	4.76	87	85	75	71.5	71.1	75	73
1971	85	4.93	4.91	85	82	---	---	69.5	70	68
1972	79	4.93	5.22	84	80	---	---	68.1	66	64
1973	75	6/ 5.29				---	---			
	80	7/ 5.61	6.95	99	91	---	---	68.3	60	56
1974	81	6.57				---	---			
	89	8/ 7.24	6.87	85	78	---	---	61.1	49	47
1975	79	7.24				---	---			
	84	9/ 7.71	8.12	89	84	---	---	68.7	53	52
1976	80	8.13								

1/ Except as noted, this is the actual percentage of the parity equivalent price published in March before the marketing year. In some cases the announced percentages, based on forward estimates of parity, were slightly different. For earlier years see DS-320, table 4. 2/ Effective April 1-September 16, 1960. 3/ Effective September 17, 1960-March 9, 1961 (Public Law 86-799). 4/ Effective March 10, 1961. 5/ Effective June 30, 1966. 6/ Effective March 15, 1973. 7/ Effective August 10, 1973. 8/ Effective January 4, 1975. 9/ Effective October 2, 1975.

Table 4.--Dairy products under price support programs, USDA purchase price per pound, 1960-76 1/

Effective date of change	Butter, Grade A or higher: Chicago	Butter, Grade A or higher: New York	Nonfat dry milk, extra grade: Spray	Nonfat dry milk, extra grade: Roller	Natural Cheddar cheese, Grade A or higher
	Cents				
4/01/60	57.974	58.75	13.40	11.40	32.75
9/17/60	60.466	61.25	13.90	11.90	34.25
3/10/61	60.466	61.25	15.90	13.90	36.10
7/18/61	60.466	61.25	16.40	14.40	36.50
4/01/62	57.966	58.75	14.40	---	34.60
4/01/63	57.966	58.75	14.40	---	35.60
4/01/65	58.966	59.75	14.60	---	36.10
4/01/66	60.966	61.75	16.60	---	39.30
6/30/66	66.466	67.25	19.60	---	43.75
4/01/68	2/ 66.442	67.25	23.10	---	47.00
4/01/69	2/ 67.644	68.50	23.35	---	48.00
4/01/70	2/ 69.846	70.75	27.20	---	52.00
4/01/71	67.784	68.75	31.70	---	54.75
4/01/72	67.708	68.75	31.70	---	54.75
4/15/73	60.922	62.00	37.50	---	62.00
8/10/73	60.922	62.00	41.40	---	65.00
4/01/74	60.570	62.00	56.60	---	70.75
1/04/75	68.070	69.50	60.60	---	77.25
4/01/75	69.193	70.75	60.60	---	79.25
10/2/75	79.693	81.25	62.40	---	85.00
4/01/76	85.817	87.75	62.40	---	90.50

1/ Prices for bulk containers--butter, 64 and 68-pound packages; nonfat dry milk, nonfortified in 100-pound bags (50-pound bags since April 1969); and cheese, mostly in 40 and 60-pound blocks. See DS-325, May 1969, table 6 for 1949-59 data. 2/ Prices varied slightly during the year due to changes in freight rates.

Table 5.--Computations of parity equivalents for manufacturing milk, per 100 pounds, marketing years, 1960-76 1/

Marketing year beginning April 1	Base period 2/: All milk wholesale	Base period 2/: Manufacturing grade milk 4/	Ratio	Adjusted base price 5/	Parity 3/: Index (1910-14=100)	Parity 3/ Prices: All milk wholesale	Parity 3/ Prices: Equivalent of manufacturing milk
	Dollars	Dollars	Percent	Dollars		Dollars	Dollars
1960	4.25	3.41	80.0	1.67	300	5.01	4.01
1961	4.29	3.42	79.7	1.70	302	5.13	4.09
1962	4.25	3.36	79.1	1.72	305	5.25	4.15
1963	4.17	3.27	78.4	1.72	310	5.35	4.19
1964	4.15	3.24	78.1	1.72	313	5.38	4.20
1965	4.17	3.25	77.9	1.74	318	3.53	4.31
1966	4.19	3.27	78.0	1.73	331	5.73	4.47
1967	4.25	3.34	78.6	1.73	340	5.88	4.62
1968	4.33	3.42	79.0	1.73	350	6.06	4.79
1969	4.44	3.52	79.3	1.76	369	6.49	5.15
1970	4.57	3.65	79.9	1.78	386	6.87	5.49
1971	4.73	3.79	80.3	1.79	405	7.21	5.79
1972	4.89	3.94	80.6	1.82	423	7.70	6.21
1973	5.09	4.13	81.1	1.83	473	8.64	7.01
1974	5.39	4.43	82.2	1.80	549	9.88	8.12
1975	5.81	4.83	83.1	1.80	612	11.00	9.14
1976	6.26	5.26	84.0	1.82	664	12.10	10.16

1/ See DS-325, May 1969, table 7 for 1948-59. 2/ For the 10 calendar years immediately preceding. 3/ From March issues of Agricultural Prices. 4/ Prior to November 1962, the "3-product" price series was used. 5/ 120-month average of farm prices for all wholesale milk divided by 120-month average of the Index of Prices Received by Farmers (both adjusted for supplemental payments), ending with December of previous year.

Support Prices Upped

The support price for manufacturing grade milk was raised to $8.13 per 100 pounds on April 1, which was 80 percent of parity (table 3). The support level for the 1976/77 marketing year was 89 cents higher than at the start of the past marketing year and 42 cents above the level which had been in effect since October 1975. In order to carry out the new support level, support purchase prices were raised to 87.75 cents per pound for butter at New York (85.82 cents per pound at Chicago) and 90.5 cents per pound for Cheddar cheese while the nonfat dry milk price remained at 62.4 cents per pound (table 4). The support price for milk, as well as support purchase prices, will be reviewed quarterly.

The April 1 parity equivalent price for manufacturing milk was $10.16 per 100 pounds, up 11 percent from a year earlier (table 5). The parity equivalent price at the beginning of the marketing year is used to determine the legal minimum (75 percent of parity) and maximum (90 percent) support levels for the marketing year. The sharp rise in the parity equivalent from a year ago primarily reflects increases in the parity index (index of prices paid by farmers), although an increased ratio of manufacturing milk prices to all wholesale milk prices and an increase in the adjusted base price also contributed. The parity index rose in all but 2 months during the past marketing year, although the sharpest increases were in April-September.

Cash Receipts Higher

Cash receipts from dairying were well above a year earlier during the first quarter of 1976 as much higher milk prices were accompanied by larger marketings. Dairy income was up almost a fourth from 1975 during January-March. Cash receipts from dairying will remain well above a year earlier in coming months although the increases likely will slacken.

During the first quarter, the index of production costs was up almost 8 percent even though feed costs were lower. Production costs likely will continue to rise in coming months but the increase from a year earlier probably will be less than the gains in dairy income.

In 1975, higher prices and virtually unchanged marketings brought cash receipts from farm marketings of milk and cream to almost $9.9 billion, up not quite 5 percent from 1974. Sales of milk to plants and dealers contributed over 97 percent with direct sales to consumers representing almost all the remainder. Cash receipts from farm-separated cream were almost negligible. Dairy income was up in all production regions except the Southern Plains. The more-than-10-percent gain in the Pacific region was the largest but the Northeast and Lake States both posted 5-percent rises last year (table 6).

Wholesale Prices Unsettled

Wholesale dairy product markets remained unsettled in early spring as the aftereffects of the tight supplies of late 1975 were still being felt. Although supplies of milk available for manufacturing have been well above a year ago, low seasonal stocks and market uncertainty have resulted in sharp price movements.

By early May, 40-pound blocks of American cheese were selling for about 95 cents per pound at Wisconsin assembly points, down almost a dime from the December peak but still about 4 cents above the support purchase price (figure 10). American cheese prices have been in almost continual movement since late November and have ranged between about 87 cents and $1.02 since the start of 1976. Although production has been well above a year ago, brisk sales have kept commercial stocks somewhat tight and the market has been fairly strong.

Wholesale butter prices also have fluctuated and Grade A butter in Chicago was quoted at almost 90 cents per pound in early May, down 19 cents from mid-December but 4 cents above the support purchase price. Low stocks and reduced output have kept prices above support levels in recent weeks, despite some probable decline in retail sales. Nonfat dry milk prices have been fairly stable at about 63 cents per pound (high heat, Central States production area) since January. In spite of production well under 1975, weak sales have held prices close to the support purchase price and small net purchases have been made.

Among other products, heavy supplies have resulted in edible dried whey prices at about 6 cents per pound in the Central States production area, while feed grade was about a penny cheaper. Edible casein was quoted at about 53 cents per pound in early May while lactose was selling for about 18 cents per pound (Eastern area). Wholesale ice cream prices in March were only slightly above January but were 5 percent above a year ago. Evaporated milk was quoted at $13.78 per case in March, up 14 percent from last March.

The wholesale price index, as reported by the Bureau of Labor Statistics (BLS), stood at 166.7 in March, down almost 3 percent from December but up 12 percent from a year earlier. The rise from a year ago may slow in coming months.

Wholesale butter and cheese prices probably will move down near support levels under the weight of the expected strong milk output during the flush

Table 6--Cash receipts from farm marketings of milk and cream, United States by production regions, selected years, 1965-75 1/

State and region	1965	1970	1971	1972	1973	1974	1975 2/
	Million dollars						
Maine	34.0	42.2	44.3	46.7	50.8	58.6	59.6
New Hampshire	21.5	23.5	24.3	24.9	27.3	29.8	32.0
Vermont	97.4	126.5	133.0	138.9	151.8	169.4	180.2
Massachusetts	47.7	47.8	48.2	47.4	50.6	56.6	58.8
Rhode Island	6.1	5.2	4.9	4.9	5.2	5.8	5.9
Connecticut	41.4	46.7	47.7	48.0	52.0	58.9	60.1
New York	478.9	612.7	631.9	647.2	704.0	808.1	850.8
New Jersey	52.3	46.9	45.1	44.0	45.7	49.4	48.5
Pennsylvania	342.6	456.0	462.0	473.0	525.7	623.8	659.3
Delaware	8.0	8.5	8.9	9.1	9.9	11.4	12.4
Maryland	78.0	100.7	103.5	104.9	113.9	133.6	145.0
NORTHEAST	1,207.9	1,516.7	1,553.8	1,589.0	1,736.9	2,005.4	2,112.6
Michigan	222.6	261.0	278.9	299.5	325.4	352.5	371.7
Wisconsin	645.5	915.8	970.1	1,035.1	1,201.3	1,396.2	1,495.0
Minnesota	342.2	442.8	461.5	479.2	570.7	664.0	670.1
LAKE STATES	1,210.3	1,619.6	1,710.5	1,813.8	2,097.4	2,412.7	2,536.8
Ohio	217.0	256.1	267.6	282.5	309.0	355.8	371.6
Indiana	118.9	133.3	139.8	146.7	163.1	187.8	189.7
Illinois	143.0	153.0	153.3	162.1	182.0	203.0	208.7
Iowa	192.8	220.7	224.3	224.9	262.2	288.6	297.5
Missouri	117.6	155.3	159.5	165.1	195.6	227.7	234.9
CORN BELT	789.3	918.4	944.5	981.3	1,111.9	1,262.9	1,302.4
North Dakota	36.6	41.3	41.3	43.2	57.3	62.3	61.9
South Dakota	46.7	68.7	73.3	76.1	92.8	104.5	100.1
Nebraska	54.8	73.2	76.2	82.3	95.6	106.7	109.5
Kansas	63.8	94.5	95.2	95.5	102.3	111.0	118.7
NORTHERN PLAINS	201.9	277.7	286.0	297.1	348.0	384.5	390.2
Virginia	82.2	104.7	109.1	112.9	125.7	151.9	161.6
West Virginia	19.4	20.3	21.5	21.2	23.7	28.3	29.1
North Carolina	74.2	94.5	98.7	102.3	118.9	140.5	150.2
Kentucky	92.5	125.8	130.7	138.7	149.2	180.3	176.7
Tennessee	86.1	113.3	115.5	123.0	133.3	156.1	154.8
APPALACHIAN	354.4	458.6	475.5	498.1	550.8	657.1	672.4
South Carolina	27.6	35.4	36.8	37.1	42.1	52.0	52.6
Georgia	55.6	80.2	80.7	86.8	96.0	116.5	115.0
Florida	87.3	126.9	141.2	149.5	172.1	211.4	221.1
Alabama	41.2	52.5	56.0	57.3	64.3	69.1	69.6
SOUTHEAST	211.7	295.0	314.7	330.7	374.5	449.0	458.3
Mississippi	49.3	60.6	61.0	63.9	70.9	79.9	80.6
Arkansas	29.8	38.3	40.7	43.6	49.2	58.3	59.0
Louisiana	53.0	73.5	76.8	79.0	85.9	102.8	106.4
DELTA STATES	132.1	172.4	178.5	186.5	206.0	241.0	246.0
Oklahoma	55.6	72.9	74.9	73.7	84.8	99.8	92.7
Texas	143.4	205.5	221.1	233.3	263.4	306.2	299.0
SOUTHERN PLAINS	199.0	278.4	296.0	307.0	348.2	406.0	391.7
Montana	13.7	15.9	16.6	17.8	19.1	22.3	22.6
Idaho	49.3	69.6	76.1	82.9	100.1	112.5	121.6
Wyoming	6.0	7.2	7.2	7.8	8.6	9.6	8.9
Colorado	38.2	53.6	56.5	59.2	65.5	75.6	76.6
New Mexico	15.0	22.0	24.2	26.0	27.7	33.5	37.7
Arizona	27.4	40.0	43.4	44.9	60.6	73.7	78.0
Utah	29.9	45.6	47.6	51.4	60.3	75.0	78.3
Nevada	6.8	8.2	8.3	8.5	9.8	14.0	14.4
MOUNTAIN	186.3	262.1	279.9	298.5	351.7	416.2	438.1
Washington	83.0	121.0	134.5	144.8	170.5	194.3	208.3
Oregon	44.1	56.2	61.0	63.0	72.6	84.8	88.6
California	403.2	534.0	560.9	608.1	693.0	894.3	997.2
PACIFIC	530.3	711.2	756.4	815.9	936.1	1,173.4	1,294.1
Alaska	2.0	2.0	1.8	2.0	2.1	2.4	2.7
Hawaii	12.8	13.0	13.2	14.5	16.5	19.4	20.5
UNITED STATES	5,037.7	6,525.2	6,810.8	7,134.7	8,080.1	9,430.1	9,865.7

1/ Totals may not add due to rounding.
2/ Preliminary.

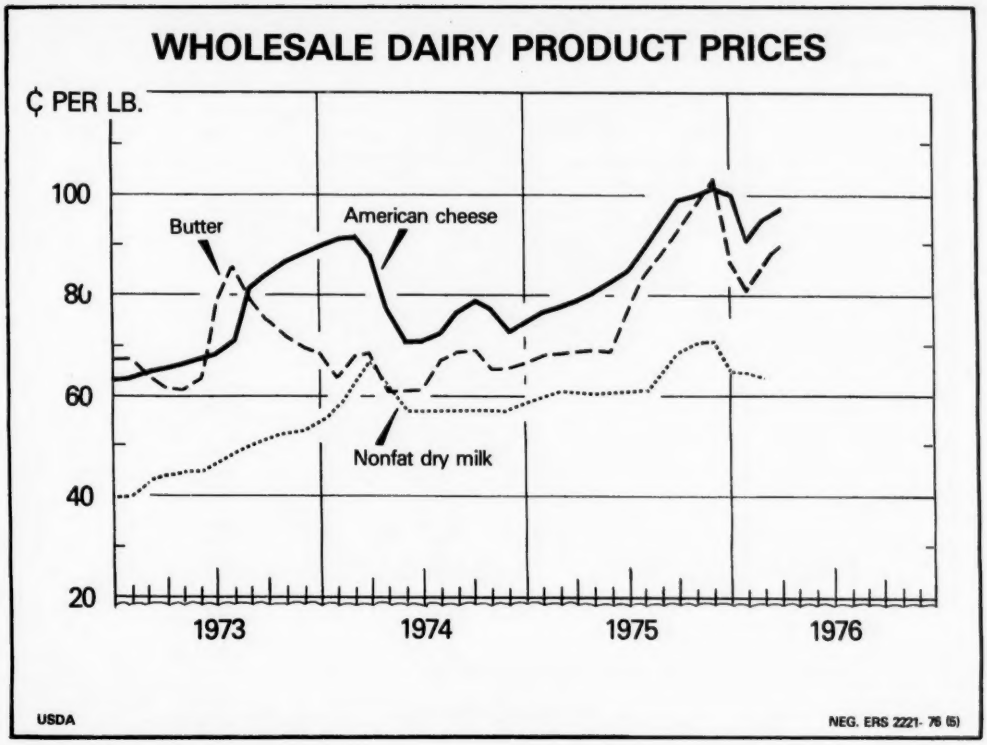

Figure 10

season. Some further slowing of fluid milk sales likely will also boost supplies of milk available for manufacturing. However, a sizable proportion of the increased production likely will go toward rebuilding commercial stocks which, combined with strong cheese sales, could start prices rising seasonally fairly early. If milk production gains do not accelerate, fluid sales show only modest declines, and butter sales remain at fair levels, wholesale dairy prices could post fairly substantial rises during the second half of 1976, although they are unlikely to match the late 1975 jumps.

Retail dairy product prices

Item	Unit	Mar. 1975	June 1975	Dec. 1975	Mar. 1976
All dairy products	1967=100	155.4	153.3	165.5	167.9
Butter	c/lb.	95.2	95.7	124.6	117.8
Processed American cheese	c/½-lb.	73.7	74.3	85.1	85.6
Ice cream	c/½-gal.	123.0	121.3	126.0	125.6
Whole milk: At stores	c½-gal.	78.9	77.2	81.1	82.8
Evaporated milk	c/can	30.6	30.4	32.3	34.0
Skim milk: At stores	c/qt.	42.2	42.0	43.9	44.9

Retail Prices Stabilize

Retail dairy prices declined just slightly in March, the first month since June 1975 that retail prices did not rise. The BLS index of retail dairy prices stood at 167.9 in March, down less than a half percent from February but up 8 percent from last March. Meanwhile, retail prices of all food items were only 4 percent above a year ago and prices of all items in the Consumer Price Index were 6 percent greater.

Declines in the prices of manufactured dairy products brought down the dairy index as fluid milk prices rose slightly. Retail butter prices dropped again in March, bringing the January to March drop to 12 cents per pound (figure 11). However, butter was selling for almost a fourth more than last March, while margarine prices at retail were down almost a fourth from a year earlier during March and have generally dropped since January 1975. The retail price of processed American cheese dropped a penny per half-pound in March, the first month-to-month decline since August 1974, but was up 16 percent from a year ago. Ice cream prices also declined in March and

were up only 2 percent from a year ago, the smallest rise from a year earlier since March 1973.

Retail fluid whole milk prices rose just barely in March and were 5 percent above a year ago. Evaporated milk prices also rose slightly.

Retail dairy prices likely will be fairly stable through midyear. Some small declines are possible but they are unlikely to be substantial. Prices of manufactured products may slip further but the sharpest drops probably have already occurred. Fluid milk prices may remain close to current levels. During the second half of 1976, retail prices likely will rise seasonally but at a slower rate than in 1975. Although the increase from a year earlier probably will diminish by yearend, 1976 retail dairy prices could average 6-8 percent above 1975.

UTILIZATION

More Milk Going Into Cheese

Cheese production in early 1976 pulled milk away from butter-powder plants as well as absorbed the increase in supplies of milk available for manufacturing. Output of American varieties was about 17 percent above 1975 during the first quarter and preliminary data indicate that the gains were greater in April. Wholesale cheese prices thus far in 1976 have given American cheese plants a decided advantage over butter-powder operations in competing for milk. Other cheese varieties have also been produced in larger quantities this year. First quarter output was up 15 percent from a year ago, with all types except Cream and Neufchatel showing increases. Total first quarter cheese production was about the same as in 1974.

Production of lowfat cottage cheese posted a substantial gain and creamed cottage cheese was slightly above 1975.

Early 1976 butter output was down, running about 5 percent below 1975 during January-March. The decline from a year ago in nonfat dry milk production was almost a fifth, reflecting the sharp reduction in milk going directly to butter-powder operations. Ice cream production trailed last year's very strong output and other frozen dessert output was also down.

About 4 percent more milk moved into manufacturing during January-March than a year ago, which primarily reflects the higher milk production. The milk equivalent of manufactured dairy

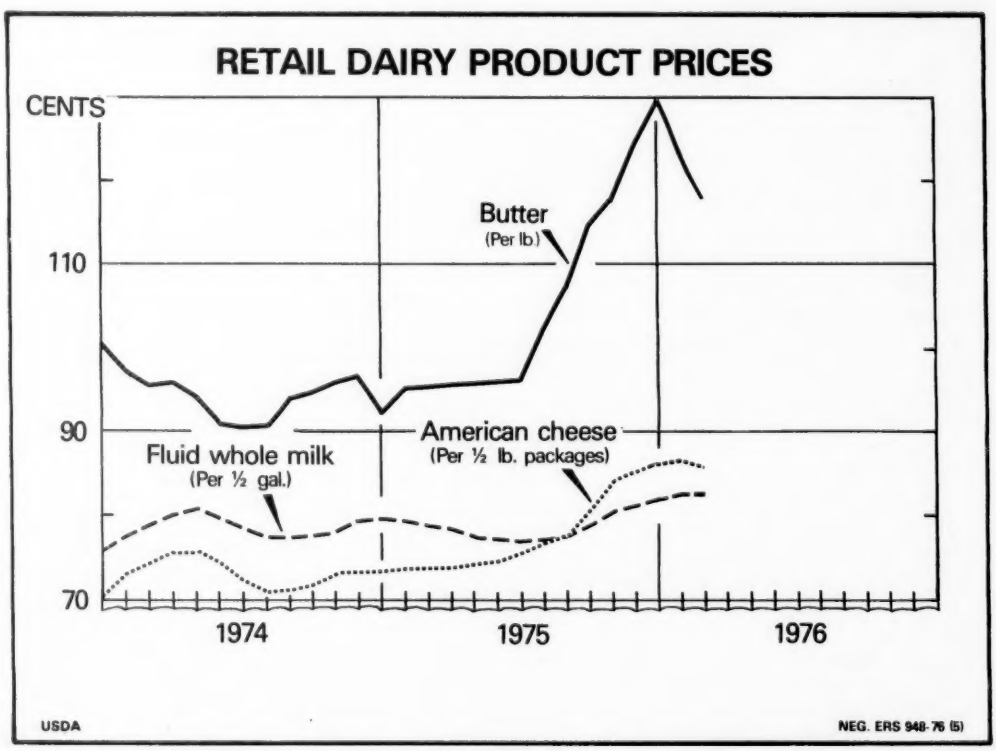

Figure 11

Table 7.--Use of market supply of milk, United States, 1960-75

Year	Fluid use	Creamery butter	Cheese: American	Cheese: Other	Creamed cottage cheese	Evaporated and condensed milk 1/	Dry whole milk	Frozen dairy products, net	Other factory products	Total factory products 2/	Miscellaneous 3/	Market supply of milk 4/
	Billion pounds											
1960	53.0	29.3	9.7	3.7	1.0	5.4	0.7	9.5	0.5	59.8	1.1	113.9
1961	52.6	31.7	11.2	3.7	1.0	5.4	.6	9.6	.4	63.6	1.2	117.4
1962	53.3	33.0	10.7	3.7	1.0	5.0	.6	9.7	.4	64.1	1.3	118.7
1963	54.3	30.8	10.9	3.9	1.0	5.0	.7	9.9	.5	62.7	1.3	118.3
1964	54.9	31.2	11.5	4.2	1.0	5.0	.6	10.3	.6	64.5	1.1	120.5
1965	55.4	28.5	11.5	4.3	1.0	4.6	.7	10.6	.6	61.8	1.2	118.4
1966	55.4	23.7	12.2	4.5	1.0	4.7	.7	10.5	.6	57.9	2.5	115.9
1967	54.0	26.1	12.7	4.5	1.0	4.0	.5	10.5	.3	59.8	1.2	114.9
1968	53.7	24.9	12.7	4.7	1.1	3.9	.6	11.0	.4	59.2	-.2	112.8
1969	52.8	23.7	12.7	4.9	1.2	3.9	.5	11.0	.4	58.3	1.0	112.1
1970	52.0	23.9	14.3	5.3	1.2	3.3	.5	11.1	.4	60.0	1.5	113.5
1971	51.8	23.9	15.1	5.8	1.3	3.2	.5	11.0	.6	61.5	1.7	115.0
1972	53.2	22.8	16.3	6.4	1.3	3.1	.6	11.0	.8	62.2	1.1	116.5
1973	52.4	18.6	16.8	6.8	1.1	2.9	.6	11.1	.7	58.7	1.8	112.8
1974	50.5	19.3	18.6	7.1	1.0	2.8	.5	11.2	.8	61.2	.7	112.4
1975 5/	51.4	19.6	16.6	7.5	1.0	2.5	.5	12.0	.8	60.6	.4	112.4
	Percentage of total market supply											
	Percent											
1960	46.5	25.7	8.5	3.2	0.9	4.8	0.6	8.3	0.4	52.5	1.0	100.0
1961	44.8	27.0	9.5	3.2	.9	4.6	.5	8.2	.3	54.2	1.0	100.0
1962	44.9	27.8	9.0	3.1	.8	4.2	.5	8.2	.3	54.0	1.1	100.0
1963	45.9	26.0	9.2	3.3	.8	4.2	.6	8.4	.4	53.0	1.1	100.0
1964	45.6	25.9	9.5	3.5	.8	4.2	.5	8.5	.5	53.5	.9	100.0
1965	46.8	24.1	9.7	3.6	.8	3.9	.6	9.0	.5	52.2	1.0	100.0
1966	47.8	20.4	10.5	3.9	.9	4.1	.6	9.1	.5	50.0	2.2	100.0
1967	47.0	22.7	11.1	3.9	.9	3.5	.4	9.1	.3	52.0	1.0	100.0
1968	47.6	22.1	11.3	4.2	1.0	3.5	.5	9.8	.4	52.5	-.2	100.0
1969	47.1	21.1	11.3	4.4	1.1	3.5	.4	9.8	.4	52.0	.9	100.0
1970	45.8	21.1	12.6	4.7	1.1	2.9	.4	9.8	.4	52.9	1.3	100.0
1971	45.0	20.8	13.1	5.0	1.1	2.8	.4	9.6	.5	53.5	1.5	100.0
1972	45.7	19.6	14.0	5.5	1.1	2.7	.5	9.4	.7	53.4	.9	100.0
1973	46.5	16.5	14.9	6.0	1.0	2.6	.5	9.8	.6	52.0	1.6	100.0
1974	44.9	17.2	16.5	6.3	.9	2.5	.4	10.0	.7	54.4	.6	100.0
1975 5/	45.7	17.4	14.8	6.7	.9	2.2	.4	10.7	.7	53.9	.4	100.0

1/ Canned and bulk. 2/ May not add due to rounding. 3/ Minor miscellaneous uses and any inaccuracies of independently determined use items. 4/ Milk marketed by farmers, net imports of ingredients such as frozen cream, butterfat-sugar mixtures and "ice cream", and net change in storage cream. 5/ Preliminary.

Production of selected manufactured dairy products, 1975-76

Item	January-March		Change from year earlier	
	1975	1976[1]	1975	1976[1]
	Million pounds	*Million pounds*	*Percent*	*Percent*
Butter	284.1	269.0	+22.9	-5.3
Cheese:				
American	396.8	464.8	-19.2	+17.1
Other	261.3	300.4	-.2	+15.0
Cottage, creamed	217.7	222.8	+.1	+2.3
Canned milk	219.0	236.1	-19.0	+7.8
Dry whole milk	12.1	20.6	-40.4	+70.2
Ice cream (Mil. gal.)	188.6	185.9	+9.4	-1.4
Milk equivalent[2]	14,688	15,308	+2.0	+4.2
Nonfat dry milk	260.9	216.4	+43.0	-17.1

[1] Preliminary. [2] Total all reported manufactured products.

products likely will continue to show sizable increases from a year ago in coming months, with the expected increases in milk output and slowing of fluid sales. Cheese probably will continue to take more milk than last year with butter-powder operations absorbing most of the supply-demand variation.

Wisconsin out-of-State milk shipments, which reflect supply-demand conditions in many other parts of the country, fell below year-earlier levels in March for the first time since February 1975. Since all of the production regions had increased milk production, there was less need to draw upon the large reserves of the Upper Midwest.

Wisconsin out-of-state milk shipments

Month	1975		1976	
	Loads	Volume	Loads	Volume
	Number	*Thousand pounds*	*Number*	*Thousand pounds*
January	252	11,844	475	22,375
February	135	6,345	176	8,272
March	138	6,486	67	3,149
April	54	2,538	20	940
May	54	2,538		
June	49	2,303		
July	77	3,619		
August	164	7,708		
September	548	25,756		
October	694	32,618		
November	544	25,568		
December	384	18,048		
Total	3,093	145,371		

1975 Fluid Use Gains

Fluid milk and cream sales (on a milk equivalent, fat solids basis) were up almost 2 percent in 1975. Stable to declining retail prices during most of the year helped to check the decline in whole milk sales while lowfat milks and cream items posted substantial increases. Fluid products accounted for 46 percent of the market supply of milk last year, up from 45 percent in 1974.

Manufactured dairy products used slightly more than 60½ billion pounds of milk in 1975, down slightly from 1974 but almost 2 billion pounds more than 2 years ago (table 7). The higher fluid sales in 1975 left less milk available for manufacturing.

Frozen desserts used substantially more domestic milk in 1975 and butter and cottage cheese also used more. Less milk was used for cheese and other products last year. Ice cream and other frozen desserts used almost a billion pounds more milk than in 1974. This held usage for butter to less than 20 billion pounds even though the milk going into cheese was down 1½ billion pounds to 24 billion pounds, as the drop in usage for American-type cheeses easily outweighed the small rise in other varieties. Last year, cheese production used 21 percent of the market supply of milk compared with 17 percent for butter.

Dairy Sales Hold

Dairy sales remained above a year earlier in March, capping a fairly strong first quarter of 1976. Commercial disappearance of milk in all products, on a daily average basis, in January-March was up almost 3 percent from last year (table 8). Even though some of the gain probably represented rebuilding of pipeline levels after the very tight situation of late 1975, dairy sales were brisk in the face of much higher retail prices. Higher cheese usage provided the main impetus as butter sales slipped and fluid sales were only slightly higher.

Commercial disappearance of American cheese, on a daily average basis, was up about 14 percent from a year ago during January-March and was second only to the first quarter of 1974 (table 9). Sales of other varieties were up a more modest 9 percent. Rising consumer incomes probably were the most significant factor but retail meat prices well above a year ago also helped. In addition, it should be noted that cheese sales were fairly weak in early 1975.

After adjusting for leap year, commercial disappearance of butter was down slightly from the very strong first quarter of 1975. Although pipeline rebuilding likely was more significant for butter than other products, butter sales compared very favorably with the early 1970's. Sales of nonfat dry milk during January-March were well above last year's depressed levels but remained low. Nonfat dry milk use was still suffering from the impact of

Table 8--Commercial disappearance: Total milk, annual and by quarters, 1974-76 1/

Item	1974	1975					1976 2/				
		By quarters				Annual	By quarters				Annual
		1st	2nd	3rd	4th		1st	2nd	3rd	4th	
	Billion pounds										
Production	115.6	28.2	31.4	28.6	27.3	115.5	29.0				
Farm use	3.3	.8	.8	.8	.8	3.2	.8				
Marketings	112.3	27.4	30.6	27.8	26.5	112.2	28.2				
Beginning commercial stocks	4.7	5.6	5.0	5.5	4.7	5.6	3.7				
Imports	2.9	.3	.2	.4	.7	1.7	.4				
Total supply	119.9	33.3	35.8	33.7	31.9	119.5	32.3				
Ending commercial stocks	5.6	5.0	5.5	4.7	3.7	3.7	4.2				
Net removals	1.3	1.1	1.2	4/-.3	5/	2.0	5/				
Commercial disappearance Actual	113.0	27.1	29.1	29.3	28.2	113.7	28.2				
Percent change 3/	+.5	-3.1	+2.9	+2.3	+.2	+.6	6/+2.6				

1/ Milk equivalent, fat solids basis. Totals may not add due to rounding. 2/ Preliminary. 3/ From year earlier using unrounded data. 4/ Minus denotes domestic sales exceeded purchases. 5/ Less than 50 million pounds. 6/ On a daily average basis.

Table 9--Commercial disappearance: Selected dairy products, United States, annual 1967-75, by quarters, 1975-76

Year and quarter	Butter, creamery 1/	Cheese		Nonfat dry milk	Canned milk	Frozen products 3/
		American 2/	Other			
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. gal.
1967	973.9	1,175.9	738.2	1,012.2	1,571.5	1,040.2
1968	976.0	1,213.3	803.0	1,058.0	1,496.8	1,082.3
1969	921.9	1,281.0	861.6	1,042.1	1,376.1	1,092.2
1970	898.2	1,398.0	909.1	983.2	1,213.8	1,097.3
1971	847.1	1,454.8	987.0	981.8	1,186.9	1,102.4
1972	885.4	1,595.7	1,127.8	919.2	1,102.6	1,108.6
1973	855.6	1,677.1	1,210.2	1,110.1	1,056.7	1,118.6
1974	929.9	1,780.6	1,269.5	809.9	999.5	1,124.3
1975	942.8	1,727.0	1,306.5	720.4	929.5	1,185.2
1975-1st	251.4	400.6	302.7	143.2	237.4	257.2
2nd	237.8	443.0	314.1	141.8	216.0	333.4
3rd	219.0	447.4	329.2	253.8	234.4	348.9
4th	234.4	435.9	361.3	181.6	241.9	245.7
1976-1st	250.4	460.2	334.2	189.6	230.1	253.7
2nd						
3rd						
4th						
	1975-76 percent change					
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
1st 4/	-1.6	+13.6	+9.4	+30.7	-4.2	-2.4
2nd						
3rd						
4th						

1/ Imports include butter equivalent of butteroil. 2/ Imports include Colby cheese; stocks do not include processed cheese. 3/ Excludes Mellorine. 4/ On a daily average basis.

cheaper substitutes for use in processed foods and the continued low sales of lowfat milks fortified with added solids.

Fluid milk sales during the first quarter held just slightly above a year ago. The gains from a year earlier started to slow during the fourth quarter of 1975 as retail prices rose sharply.

Sales prospects for coming months are mixed. Fluid sales probably will slip below last year's strong levels, although stabilizing retail prices will help to limit the declines. Cheese sales show no signs of abatement and likely will remain strong. The wider retail price relationships between butter and margarine probably will have more impact on commercial disappearance of butter in coming months, although it may remain good compared with the early 1970's. Nonfat dry milk use may remain above 1975 but likely will be at fairly weak levels. Although retail ice cream prices are just slightly above a year ago, prices of competing desserts are generally lower and frozen dessert sales may not match last year's very strong levels.

Donations Up in 1975

USDA donations of dairy products to schools, institutions, and needy persons rose to 2.3 billion pounds milk equivalent in 1975, up from 1.5 billion pounds in 1974 but well below earlier years. Last year, donations represented only about 2 percent of civilian milkfat consumption and 0.7 percent of milk solids-not-fat use (table 10).

The school feeding programs, with an average 25 million children participating in the school lunch and almost 2 million in the school breakfast program, are now the only major domestic outlet for dairy product donations. Direct distribution of commodities to needy families has been almost completely phased out in favor of food stamps and other special programs are fairly minor.

The fairly heavy government purchases in the first half of 1975 allowed donations of butter to rise 25 million pounds to about 73 million pounds and cheese donations were up about 30 million pounds to 73 million pounds. Although domestic cheese donations were substantial, butter donations were well under earlier years.

Despite the large quantities available, only limited amounts of nonfat dry milk could be used in the remaining domestic donation outlets. Donations (including that in scrambled egg mix) came to about 36 million pounds in 1975, down from the previous year and well below earlier years. Evaporated milk donations also were slightly below a year earlier.

Donations of butter and possibly cheese are likely to be down this year as government supplies are expected to be limited. Nonfat dry milk and evaporated milk donations probably will be about stable.

Per Capita Consumption May Decline

Milk use per person could be down about 1 percent this year, as total milk use could be about the same to slightly lower. This year's gains in milk output are expected to be absorbed in rebuilding the stocks which were depleted during 1975.

Per capita cheese consumption could show a sizable increase after last year's decline, possibly reaching 15 pounds. Fluid lowfat milks likely will continue upward while fluid whole milk probably will slip. Butter use per person could decline and per capita consumption of ice cream may ease slightly after last year's jump. In 1975, consumers used the equivalent of 546 pounds of milk per person, up a half percent from 1974 but down 1½ percent from 1973. Even though cheese consumption

Table 10—USDA domestic donations of dairy products to schools, institutions, and needy persons, 1970-75

Product	Unit	1970	1971	1972	1973	1974	1975
Butter	Mil. lb.	168.3	170.5	158.6	162.5	47.8	73.2
American cheese	do.	45.6	75.0	46.0	4.0	42.6	72.9
Evaporated milk	do.	89.2	95.4	81.8	58.4	22.9	24.4
Nonfat dry milk:							
Regular	do.	89.3	61.3	43.5	17.8	28.3	29.6
Instant	do.	32.2	63.5	58.9	35.7	15.6	4.9
Scrambled egg mix[1]	do.	13.1	15.9	14.1	13.4	6.5	1.5
Milk beverage mix[2]	do.	.5	---	---	---	---	---
Butteroil	do.	---	.5	---	---	---	---
Instant milk formula	do.	---	---	.2	.2	.2	.1
Milk equivalent[3]	do.	4,187	4,526	3,906	3,521	1,459	2,296
Percent of civilian consumption	Pct.	3.7	4.0	3.4	3.1	1.3	2.0
Solids-not-fat	Mil. lb.	153	167	133	69	62	63
Percent of civilian consumption	Pct.	1.8	2.0	1.5	.8	.7	.7

[1] 30% nonfat dry milk. [2] 45% nonfat dry milk. [3] Fat solids basis.

Table 11--Dairy products: Per capita civilian consumption, selected products, United States, 1955-75

Year	Butter	Cheese		Cottage cheese	Evaporated and condensed milk	Dry whole milk	Ice cream	Nonfat dry milk	Fluid products 1/
		American	Other						
					Pounds				
1955	9.0	5.4	2.5	3.9	16.2	0.3	18.0	5.5	348
1956	8.7	5.4	2.6	4.5	15.9	.3	18.0	5.2	348
1957	8.3	5.1	2.6	4.6	15.4	.2	18.0	5.3	344
1958	8.3	5.5	2.6	4.6	14.8	.3	17.8	5.6	337
1959	7.9	5.2	2.8	4.7	14.3	.3	18.7	6.2	330
1960	7.5	5.4	2.9	4.8	13.7	.3	18.3	6.2	322
1961	7.4	5.7	2.9	4.6	13.3	.3	18.0	6.2	312
1962	7.3	6.1	3.1	4.6	12.5	.3	17.9	6.1	308
1963	6.9	6.1	3.1	4.6	11.6	.3	18.0	5.8	307
1964	6.9	6.2	3.2	4.7	11.4	.3	18.3	5.9	304
1965	6.4	6.2	3.4	4.7	10.7	.3	18.5	5.6	302
1966	5.7	6.2	3.6	4.6	9.7	.3	18.2	5.9	297
1967	5.5	6.4	3.7	4.5	9.0	.3	17.8	5.6	285
1968	5.7	6.6	4.0	4.6	8.9	.2	18.4	5.8	280
1969	5.4	6.7	4.2	4.8	7.9	.2	18.0	5.8	272
1970	5.3	7.1	4.4	5.2	7.1	.2	17.7	5.4	264
1971	5.1	7.4	4.7	5.4	6.8	.2	17.6	5.3	259
1972	4.9	7.8	5.4	5.4	6.4	.1	17.4	4.6	263
1973	4.8	8.0	5.7	5.2	6.0	.1	17.5	5.3	257
1974	4.6	8.6	6.0	4.7	5.6	.1	17.5	4.2	246
1975 2/	4.7	8.4	6.1	4.8	5.0	.1	18.8	3.4	248

1/ Milk equivalent (fat solids basis) of whole milk, cream items, and skim milk. 2/ Preliminary.

Table 12--Milk solids in all dairy products: Production and disposition, 1960-75

Year	Production 1/	Sold by farmers	Consumed on farms where produced 2/	National School Lunch and Special Milk Programs	USDA donations 3/	Other	Total	Per capita
	Million pounds							Pounds
	Milkfat							
1960	4,628	4,278	249	88	76	3,956	4,369	24.5
1961	4,715	4,395	223	92	128	3,908	4,351	24.0
1962	4,718	4,431	199	98	177	3,918	4,392	23.9
1963	4,649	4,380	179	103	179	3,911	4,372	23.4
1964	4,699	4,455	160	107	189	3,960	4,416	23.4
1965	4,592	4,371	145	113	132	3,990	4,380	22.9
1966	4,426	4,250	129	117	43	4,014	4,303	22.3
1967	4,377	4,189	116	117	114	3,826	4,173	21.4
1968	4,305	4,129	104	117	151	3,805	4,177	21.2
1969	4,264	4,104	94	119	169	3,778	4,160	20.9
1970	4,283	4,134	84	113	157	3,794	4,148	20.6
1971	4,344	4,201	77	113	169	3,817	4,176	20.5
1972	4,408	4,284	71	111	149	3,922	4,253	20.6
1973	4,221	4,098	65	109	136	3,924	4,234	20.3
1974	4,238	4,119	63	107	55	3,964	4,189	20.0
1975 4/	4,247	4,128	61	105	85	3,999	4,250	20.1
	Milk solids-not-fat							
1960	10,637	9,228	571	210	112	6,841	7,734	43.4
1961	10,861	9,599	514	222	172	6,884	7,792	43.0
1962	10,895	9,773	460	236	217	6,990	7,903	43.0
1963	10,792	9,792	415	248	200	7,034	7,897	42.3
1964	10,945	10,041	374	259	190	7,233	8,056	42.6
1965	10,704	9,905	337	275	166	7,380	8,177	42.7
1966	10,324	9,621	301	283	124	7,488	8,196	42.4
1967	10,223	9,594	271	285	130	7,434	8,120	41.6
1968	10,081	9,528	244	288	144	7,559	8,235	41.8
1969	9,985	9,490	221	293	152	7,636	8,302	41.7
1970	10,059	9,622	198	298	153	7,637	8,286	41.1
1971	10,194	9,794	181	300	167	7,867	8,515	41.7
1972	10,324	9,954	167	302	133	8,112	8,714	42.2
1973	9,923	9,581	153	301	69	8,342	8,865	42.6
1974	9,938	9,593	147	301	63	8,149	8,660	41.3
1975 4/	9,941	9,613	142	301	63	8,225	8,752	41.4

1/ Quantities produced and used, estimated by applying the percentage of milkfat and solids-not-fat in each product to the amount of products. 2/ Fluid milk and cream and farm-churned butter. 3/ Butter, cheese, evaporated milk, nonfat dry milk, and dry whole milk. 4/ Preliminary.

slipped slightly, per capita consumption of butter, ice cream, and fluid milk was up (table 11).

Milkfat consumed per person averaged 20.1 pounds last year, up from 20.0 pounds in 1974 (table 12). During the past 5 years, per capita use of milkfat has dropped a half pound, a much slower rate of decline than in the 1960's. In recent years, there has been no clear trend in per capita use of solids-not-fat. Americans consumed an average 41.4 pounds of milk solids-not-fat in 1975, up slightly from 1974. This level was actually slightly higher than 1970 although it was well below 1972's 42.6 pounds. Over a longer period, per person consumption of solids-not-fat has declined only slightly, as a higher proportion of the total production of solids-not-fat has been utilized for human food.

Government Purchases Lower

With wholesale dairy product prices generally above the support purchase prices, USDA removals under the price support program were negligible in early 1976, except for small amounts of nonfat dry milk. This was in sharp contrast to January-April 1975 when 1.5 billion pounds milk equivalent was removed from the commercial market. During the 1975/76 marketing year ended March 31, Commodity Credit Corporation (CCC) had net removals equivalent to about 0.9 billion pounds of milk, down sharply from 2.4 billion pounds during the previous year and only slightly above the 1973/74 marketing year (table 13).

USDA dairy purchases

Item	January-April		
	1975	1976	Change
	Million pounds	*Million pounds*	*Percent*
Butter	51.9	.4	-99.2
American cheese	45.8	.5	-98.9
Nonfat dry milk	211.3	24.7	-88.3
Evaporated milk	9.0	10.6	+17.8
Milk equivalent	1,543	36	-97.7

Practically no butter and cheese was purchased during the first 4 months of 1976 and only 25 million pounds of nonfat dry milk. This reflected the fairly tight conditions and the rebuilding of commercial stocks during early 1976.

USDA recently announced in April that the sell-back price for nonfat dry milk was 65.5 cents per pound, about 6 cents lower than the previous price. This reflects a change in policy concerning the sale of CCC-owned dairy products to the domestic industry for unrestricted use. After domestic program needs have been met, CCC will now sell products at approximately 105 percent of the current support purchase prices instead of the 115 percent level in effect before April 1976.

CCC is also selling back to the market, on a bid basis, nonfat dry milk for unrestricted use that had picked up moisture during storage and therefore was regraded as Standard grade. About 20 million pounds of Standard grade nonfat dry milk were sold to the domestic industry in March and April at prices ranging from 58.0 to 60.9 cents per pound —mostly 58-59 cents.

Although CCC may purchase some butter and cheese in late spring and summer, removals of these products are not likely to be heavy unless milk production spurts or commercial sales weaken substantially. Most of the expected increase in production probably will be used to replenish commercial stocks. Nonfat dry milk removals could once again be heavy if sales remain low as expected. However, the diversion of milk from butter-powder to cheese operations will help to limit government purchases of nonfat dry milk.

Uncommitted CCC stocks

Item	April 30	
	1975	1976
	Million pounds	*Million pounds*
Butter (bulk)	46.3	---
Cheddar cheese	7.3	---
Nonfat dry milk	286.5	384.7

USDA held no uncommitted inventories of butter or cheese on May 1, although nonfat dry milk holdings remained heavy at 385 million pounds. With further purchases expected, uncommitted inventories of nonfat dry milk likely will remain sizable. On the other hand, uncommitted inventories of butter and cheese probably will remain small since the expected level of purchases can readily be used in the school feeding programs.

Commercial Stocks Start Recovery

Commercial dairy stocks have recovered somewhat from last winter's low levels but the strong sales have kept commercial holdings rather tight. The 4.2 billion pounds milk equivalent in commercial hands on April 1 was down 17 percent from 1975 and somewhat more from 1974. However, this was up almost a half billion pounds from February 1—stocks normally decline during this period.

Most of the February-March rise was due to the rebuilding of butter stocks. On April 1, 26 million pounds were in commercial hands, up from only 5 million pounds on February 1 but still down almost

Table 13--Dairy products removed from the commercial market by programs of the U.S. Department of Agriculture, marketing years, 1960-75 1/

Marketing year	Removals 2/						Solids content of removals			
	Butter 3/	Cheddar cheese	Dry whole milk	Evaporated milk	Nonfat dry milk 4/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings	
									Milkfat	Solids-not-fat
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Bil. lb.	Mil. lb.	Mil. lb.	--- Percent ---	
1960/61	154.4	0.3	---	---	837.3	3.3	130.2	804.9	3.0	8.6
1961/62	434.8	191.2	---	---	1,275.4	11.2	420.5	1,286.3	9.5	13.3
1962/63	346.9	134.4	---	---	1,303.0	8.8	331.6	1,294.8	7.5	13.2
1963/64	292.3	120.1	---	---	1,173.6	7.5	282.2	1,168.9	6.4	11.9
1964/65	316.5	134.3	---	---	1,223.0	8.2	306.6	1,221.0	6.9	12.2
1965/66	126.3	21.2	---	---	880.5	2.9	114.8	854.9	2.6	8.7
1966/67	109.2	39.9	---	---	421.0	2.7	103.6	418.4	2.4	4.4
1967/68	246.5	175.1	---	---	633.4	7.0	259.3	665.7	6.2	7.0
1968/69	186.4	66.9	---	54.9	555.9	4.8	179.8	567.1	4.4	6.0
1969/70	182.1	30.6	---	107.5	357.6	4.4	167.4	374.6	4.1	3.9
1970/71	305.4	56.8	---	79.0	452.3	7.2	273.5	469.9	6.6	4.9
1971/72	262.4	87.0	0.6	102.0	463.5	6.6	250.7	494.1	5.9	5.0
1972/73	220.2	20.1	1.5	81.2	259.9	5.0	192.4	274.1	4.5	2.8
1973/74	26.1	4.9	3.4	50.0	41.6	.7	27.7	53.2	.7	.6
1974/75	66.9	93.5	.9	33.7	393.6	2.4	89.6	414.8	2.2	4.3
1975/76 5/	26.1	33.3	---	24.5	274.8	.9	35.6	279.3	.9	2.9

1/ For earlier years see DS-335, May 1971, page 22. 2/ Delivery basis after domestic unrestricted sales. Includes purchases of butter, cheese, evaporated milk, and nonfat dry milk under Section 709 and section 4(a). 3/ Includes butter equivalent of anhydrous milkfat, and PIK purchases. 4/ Includes PIK certificates issued; beginning January 1972, also includes Title I exports originating from private stocks. 5/ Preliminary.

Dairy product stocks

Item	Apr. 1, 1974	Apr. 1, 1975	Apr. 1, 1976
	Million pounds	*Million pounds*	*Million pounds*
Butter			
Commercial	50.5	31.6	26.0
Total	58.1	60.5	29.5
American cheese			
Commercial	363.2	383.0	311.9
Total	363.8	386.2	312.7
Other cheese			
Commercial	75.1	62.0	57.9
Nonfat dry milk			
Manufacturers'	56.7	114.4	55.6
Total	56.7	334.9	475.6
Milk equivalent[1]			
Commercial	5,334	5,016	4,188
Total	5,497	5,646	4,269

[1] Total all dairy products.

a fifth from last year. Commercial butter stocks probably will grow at a fairly substantial seasonal rate in the next few months. Commercial cheese holdings have risen counter-seasonally. American cheese stocks reached 312 million pounds on April 1, up 10 million pounds from February 1 but down a fifth from 1975. In view of the very strong sales, these holdings were still a little tight. Stocks of other cheese varieties were also tight and had not begun to rise. Cheese stocks likely will expand to more ample seasonal levels by this summer.

Manufacturers' stocks of nonfat dry milk had risen to 55 million pounds on April 1, about half last year's level but in line with earlier years. These stocks may be held to a modest seasonal growth by sales to CCC, since usage is expected to remain weak, government stocks will be availabe for unrestricted use at a lower price than previously, and CCC-owned Standard grade nonfat dry milk is available at reduced prices.

FOREIGN TRADE AND DAIRY TRENDS

Dairy Imports Steady

First quarter imports of dairy products were equivalent to 0.4 billion pounds of milk, up only slightly from the same months of last year (table-14). Dairy imports have been low since mid-1974.

Among nonquota items, lactose imports were down substantially from a year ago during the first quarter, while considerably more casein was brought into this country. Casein prices, low relative to domestic nonfat dry milk prices, likely have encouraged greater use and the increase in casein imports. Likewise, lower prices than a year ago for sugar and lactose likely were responsible for the decreased imports of lactose.

Dairy product imports (milk equivalent)

Month	1974	1975	1976
	Million pounds	*Million pounds*	*Million pounds*
January	372	197	156
February	530	72	126
March	537	79	139
April	160	80	
May	151	72	
June	111	80	
July	138	117	
August	146	108	
September	134	152	
October	179	196	
November	184	292	
December	282	241	
Total	2,925	[1] 1,674	

[1] Revisions not reflected in monthly data.

Nonquota and quota type cheeses were imported in slightly larger quantities than last year. Cheese imported outside quota primarily includes the "pricebreak" Swiss and "Other" types, as well as Pecorino, Roquefort, and other specialized varieties. Cheese imports accounted for nearly 80 percent of the value of all dairy imports in 1975. The European Community continued to supply nearly one-half of the total with Norway, Austria, New Zealand, Switzerland, and Finland providing most of the rest. Among other quota products, imports of butter and butterfat mixtures in early 1976 were running considerably above year-earlier levels but these products are limited by very small annual quotas.

Because of the increase in USDA's purchase price for Cheddar cheese on April 1, the "pricebreak" level, which controls the quota status of Emmenthaler cheese, Gruyere-process cheese, and the miscellaneous tariff category of "Other" cheese, was raised to 98 cents per pound, f.o.b. country of origin, effective April 14, up from 92 cents per pound in effect since last October. Under the provisions of Presidential Proclamation 4138 of June 1972, imports of these cheeses priced below the pricebreak level are subject to quota, while those priced at or above can enter outside of quota. The proclamation specifies that the pricebreak shall be 7 cents above the CCC purchase price for Cheddar cheese, rounded to the nearest whole cent, and shall change whenever the CCC purchase price changes.

Action has recently been taken to prevent evasion of U.S. import quotas on nonfat dry milk and

Table 14--Dairy products: U.S. imports, quota and non-quota, total 1975, and January-March, 1975-76 1/

Product	Calendar year quota	1975 imports	March			Cumulative, January-March		
			1975	1976	1976 as a % of 1975	1975	1976	1976 as a % of 1975
	Thou. lb.	Thou. lb.	Thou. lb.	Thou. lb.	Pct.	Thou. lb.	Thou. lb.	Pct.
Cheese, quota types								
American-Cheddar	10,037.5	10,600	61	104	170	1,840	908	49
-Other	6,096.6	6,033	---	---	---	46	641	1,393
Italian-Original loaves	11,500.1	10,173	268	1,578	589	930	2,998	322
-Other	1,494.0	1,232	36	196	544	145	323	223
Edam and Gouda-Natural	9,200.4	(9,207)	(475)	(771)	(162)	(1,715)	(1,365)	(80)
-Processed	3,151.0							
Blue Mold	5,017.0	4,564	308	251	81	824	625	76
Swiss-Emmenthaler, -92¢ *	20,420.0	9,409	610	1,516	249	1,704	3,107	182
-Gruyere-process, 92¢ *	11,242.0	5,700	213	283	133	704	1,638	233
Other-Over 0.5% fat, -92¢ *	40,730.0	17,852	632	556	88	1,909	1,559	82
-Under 0.5% fat	8,901.0	6,360	---	176	---	334	920	275
Total	127,789.6	81,130	2,603	5,430	209	10,151	14,083	139
Cheese, non-quota types								
Swiss-Emmenthaler, 92¢ + *		37,342	2,784	4,592	165	7,527	9,840	131
-Gruyere-process, 92¢ + *		6,450	450	555	123	1,474	1,256	85
Other, 92¢ + *		34,442	1,514	3,010	199	6,565	7,168	109
Pecorino		17,114	1,821	1,639	90	5,990	4,924	82
Roquefort		1,392	118	207	175	317	458	144
Other 2/		1,557	76	76	100	175	340	194
Total		98,297	6,763	10,080	149	22,048	23,986	109
Other quota products								
Butter	707.0	526	47	40	85	55	118	215
Butteroil	1,200.0	1,200	---	---	---	1,200	1,200	100
Butterfat mixtures	2,580.0	1,828	---	343	---	1	684	68,400
Ice cream	3,377.3	---	---	---	---	---	---	---
Frozen cream	12,540.0	12,352	---	597	---	3,910	5,487	140
Nonfat dry milk	1,807.0	2,465	40	---	---	794	715	90
Dried buttermilk	496.0	783	---	---	---	428	137	32
Evaporated milk	1,312.0	455	---	---	---	414	---	---
Condensed milk	4,079.0	445	41	40	98	160	66	41
Chocolate crumb-Regular	17,000.0	4,056	300	269	90	300	1,185	395
-Lowfat	4,680.0	1,214	---	---	---	---	140	---
Animal feed with milk solids	16,300.0	15,795	406	752	185	978	2,504	256
Non-quota products								
Casein		58,444	1,330	8,254	621	10,271	25,334	247
Lactose		5,501	1,851	136	7	4,088	305	7
Milk equivalent, fat solids basis, total all products	1,305,620	1,673,997	79,285	139,261	176	347,974	420,912	121

1/ Preliminary. 2/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya.
*Price break effective October 16, 1975.

other dry milks by mixing them with other ingredients. Presidential Proclamation No. 4423, effective March 31, established a zero import quota on such mixtures if they are capable of being processed further. This closed a loophole in the quota system created by the fact that dried milk was not classified as a dairy product if it was mixed with another ingredient which was the chief component of value in the mixture. The quota is temporary pending an investigation and report to the President by the U.S. International Trade Commission. The Commission's investigation began on April 26 and a public hearing was announced for May 25.

Nonfat Dry Milk Programmed for Export

USDA recently announced that it has programmed 300 million pounds of nonfat dry milk for donation under Title II of Public Law 480. Approximately 100 million pounds is authorized for use through September 30, 1976 and another 200 million pounds is programmed for use in the next fiscal year. While nonfat dry milk exports this year are likely to be greater than the low levels of the past 3 years, they are not likely to reach the 400-million-pound averages of the early 1970's. First quarter 1976 nonfat exports totaled less than 1 million pounds.

Exports of other dairy products continued at very low levels. First quarter exports were equivalent to 0.1 billion pounds of milk, slightly more than a year ago. Exports of dry whole milk were above year-earlier levels. Commercial dairy product exports are likely to remain at low levels.

January-March dairy product exports

Product	1975	1976	Change
	Million pounds	*Million pounds*	*Percent*
Butter[1]	0.3	0.1	-66.7
Cheese	1.9	2.1	+10.5
Evaporated milk	12.0	12.3	+2.5
Condensed milk	.8	.5	-37.5
Dry whole milk	6.9	9.6	+39.1
Nonfat dry milk	12.8	.9	-93.0
Milk equivalent[2]	120.1	132.2	+10.1

[1] Includes butter equivalent of butteroil and anhydrous milkfat. [2] Includes some products not shown separately.

An additional 0.1 billion pounds of milk equivalent was shipped to U.S. territories early this year, mostly in the form of cheese and evaporated milk.

U.S. dairy exports last year increased in both value and quantity compared with the 2 preceding years. Nonfat dry milk exports, mostly under PL 480, constituted more than half of the total value of U.S. dairy exports. India, the major recipient, obtained just over 40 percent of the total, while Sudan, Algeria, Bangladesh, Pakistan, Afghanistan, Philippines, Egypt, Colombia, and South Vietnam received most the the rest.

World Dairy Supplies Expanding

Milk production increased from a year earlier in most major producing countries in early 1976, although it was down in the Soviet Union and Australia. Increases were largely due to a slower

Table 15—Imports, exports, and shipments of dairy products, 1960-75[1]

Year	Imports		Exports		Shipments[2]	
	Quantity	Percent of production	Quantity	Percent of production	Quantity	Percent of production
	Million pounds	*Percent*	*Million pounds*	*Percent*	*Million pounds*	*Percent*
1960	604	0.5	776	0.6	253	0.2
1961	760	.6	655	.5	277	.2
1962	795	.6	1,287	1.0	431	.3
1963	915	.7	5,036	4.0	457	.4
1964	830	.7	6,872	5.4	582	.5
1965	923	.7	1,836	1.5	522	.4
1966	2,791	2.3	778	.6	430	.4
1967	2,908	2.4	363	.3	461	.4
1968	1,780	1.5	1,185	1.0	586	.5
1969	1,621	1.4	921	.8	498	.4
1970	1,878	1.6	438	.4	548	.5
1971	1,356	1.1	2,458	2.1	568	.5
1972	1,694	1.4	1,469	1.2	677	.6
1973	3,859	3.3	654	.6	638	.6
1974	2,923	2.5	582	.5	576	.5
1975[3]	1,674	1.4	546	.5	495	.4

[1] Milk equivalent, fat solids basis. [2] To U.S. territories. [3] Preliminary.

rate of decline in cow numbers in most of the developed countries and some increase in output per cow. However, cow numbers are reportedly increasing in New Zealand and the Netherlands. 1976 milk production in the 39 major producing countries is likely to show an increase considerably greater than 1975's 1-percent rise from a year earlier.

Cheese production continued to expand early this year in most European countries with the two major producing countries—France and Germany—both reporting increases. Production was reportedly down in both the Netherlands and the United Kingdom. In Oceania, cheese production was increasing in Australia and decreasing in New Zealand. While cheese stocks have not changed greatly in recent months, stocks are running higher than year-earlier levels in some EC countries and Oceania, while stocks in Canada have shown a decline.

Butter production in the EC in early 1976 was substantially higher than year-earlier levels and may cause concern about stock levels in coming months. Canadian stocks have increased substantially, while holdings in Oceania are down.

Nonfat dry milk production increased in most of the major producing countries in early 1976 with the exception of Oceania. Heavy stocks persist in most major producing countries as difficulties are encountered in finding export markets. Skim milk reportedly is being diverted to casein production, especially in New Zealand.

Table 16.--U.S. Dairy Situation at a Glance

Item	Unit or base period	1974	1975					1976		
		Mar.	Jan.	Feb.	Mar.	Apr.	Year	Jan.	Feb.	Mar.
Production and cow numbers:										
Total milk	Mil. lb.	9,993	9,379	8,781	10,021	10,121	115,458	9,545	9,248	10,250
Milk per cow	Lb.	889	837	784	896	905	10,354	862	835	926
Number of milk cows	Thou.	11,243	11,199	11,195	11,189	11,186	11,151	11,079	11,072	11,072
Prices received by farmers:										
All milk, sold to plants, 100 pounds	Dol.	8.96	8.37	8.32	8.18	8.14	8.71	10.20	9.79	9.72
Percentage of parity 1/	Pct.	92	74	74	75	76	77	82	78	80
Manufacturing grade milk, 100 pounds	Dol.	8.14	7.00	7.04	7.02	7.07	7.62	9.07	8.45	8.53
Parity equivalent	Dol.	8.12	9.14	9.22	9.14	9.31	9.44	10.00	10.08	10.16
Fat content	Pct.	3.66	3.77	3.73	3.69	3.66	3.67	3.77	3.71	3.66
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol.	8.15	6.80	6.85	6.86	6.94	7.62	8.90	8.25	8.60
Milk eligible for fluid market, 100 pounds	Dol.	9.19	8.73	8.67	8.50	8.45	9.00	10.50	10.20	10.00
Price ratios and dairy ration values:										
Milk-feed	Lb.	1.49	1.25	1.33	1.38	1.30	1.46	1.75	1.66	1.64
Manufacturing grade milk-hog	Lb.	.23	.18	.18	.18	.18	.16	.19	.18	.19
Manufacturing grade milk-beef cattle	Lb.	.20	.26	.26	.25	.22	.24	.27	.25	.25
Value of concentrate ration fed milk cows	Dol.	6.01	6.64	6.21	5.90	6.25	5.99	5.84	5.89	5.91
Farm cash receipts from dairy products	Mil. dol.	---- REVISED MONTHLY DATA NOT AVAILABLE ----					9,866	964	879	1,006
Production of factory products:										
Creamery butter	Mil. lb.	76.8	97.4	90.4	96.3	100.9	975.6	94.3	85.4	89.3
American cheese, whole milk	Mil. lb.	183.7	130.6	122.1	144.1	152.9	1,664.5	149.3	149.7	165.8
Cheese, other than American	Mil. lb.	92.9	85.7	81.7	93.9	90.5	1,131.4	99.7	91.5	109.1
Canned milk, unskimmed	Mil. lb.	93.3	73.9	70.2	75.0	77.9	932.5	76.2	73.3	86.6
Dry whole milk	Mil. lb.	7.6	4.8	3.9	3.4	3.4	63.6	7.4	6.7	6.5
Frozen products 2/	Mil. gal.	91.0	79.3	81.4	96.5	97.4	1,185.2	74.3	77.4	102.0
Creamed cottage cheese	Mil. lb.	76.2	71.8	68.9	77.0	78.9	881.5	70.5	69.6	82.7
Total whole milk equivalent 3/	Mil. lb.	5,204	4,816	4,629	5,243	5,459	59,117	4,983	4,830	5,495
Nonfat dry milk, human use	Mil. lb.	70.9	83.5	81.6	95.8	111.5	1,024.9	67.0	71.1	78.4
Wholesale prices:										
Butter, 92-score, Chicago, pound	Ct.	68.1	66.8	68.1	68.1	69.2	79.4	86.1	80.9	86.0
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct.	91.2	74.8	76.9	77.4	78.8	86.6	100.4	90.0	94.4
Evaporated milk, case (mid-point of range)	Dol.	11.48	11.93	11.93	12.08	12.08	12.27	13.78	13.78	13.78
Dry whole milk, pound	Ct.	69.9	64.5	64.8	63.8	64.1	71.0	83.1	78.2	78.5
Nonfat dry milk, pound	Ct.	62.2	59.3	60.5	61.0	60.7	63.3	65.9	64.3	63.5
Dairy products and ice cream index (BLS)	1967=100	151.2	148.3	148.5	148.6	148.9	155.8	169.7	163.4	166.7
Retail prices (BLS):										
Milk, fresh, grocery, half-gallon	Ct.	78.9	79.3	79.2	78.9	78.5	78.5	82.2	82.7	82.8
Evaporated milk, 14½-ounce can	Ct.	27.4	30.5	30.6	30.6	30.5	30.8	33.5	33.8	34.0
Cheese, American, processed, sliced, ½-pound package	Ct.	74.3	73.1	73.6	73.7	73.8	76.8	85.9	86.7	85.6
Butter, pound	Ct.	95.4	92.1	94.9	95.2	95.4	102.5	129.7	123.1	117.8
Ice cream, half-gallon	Ct.	101.1	121.6	122.3	123.0	122.0	122.3	124.8	126.8	125.6
Dairy products index	1967=100	151.5	155.2	155.6	155.4	154.8	156.6	168.2	168.5	167.9
All foods index	1967=100	159.1	170.9	171.6	171.3	171.2	175.4	180.0	180.0	178.7
Margarine, colored, pound	Ct.	51.3	77.4	70.8	69.7	67.4	62.9	56.6	54.3	53.5
Stocks, end of month:										
Creamery butter	Mil. lb.	58.1	53.7	61.4	60.5	66.7	---	9.3	16.5	29.5
Cheese, total 4/	Mil. lb.	438.9	485.9	458.5	448.2	441.5	---	362.6	365.9	370.6
Canned milk, unskimmed	Mil. lb.	62.2	68.1	61.8	54.3	60.3	---	44.6	49.6	57.4
Dry whole milk	Mil. lb.	8.3	7.3	7.5	6.0	5.0	---	8.7	11.0	7.4
Total whole milk equivalent 5/	Mil. lb.	5,497	5,897	5,783	5,646	5,715	---	3,751	3,957	4,269
Nonfat dry milk	Mil. lb.	56.7	308.4	315.0	334.9	328.4	---	453.6	460.3	475.6
Commercial disappearance:										
Creamery butter	Mil. lb.	69.0	90.4	70.7	90.3	83.1	942.8	96.3	77.2	76.9
Cheese, American	Mil. lb.	185.8	125.3	135.3	140.0	147.7	1,727.0	153.4	147.8	159.0
Cheese, other than American	Mil. lb.	103.8	102.7	93.9	106.1	100.8	1,306.5	112.4	100.6	121.2
Canned milk, unskimmed	Mil. lb.	87.8	83.6	73.9	79.9	70.2	929.5	88.0	65.5	76.6
Milk in all products	Mil. lb.	9,667	9,102	8,342	9,705	9,507	113,719	9,488	8,862	9,821
Nonfat dry milk	Mil. lb.	131.3	58.8	43.2	41.2	45.2	720.4	64.4	58.4	66.8
USDA net removals:										
Butter	Mil. lb.	1.1	6.9	16.7	13.7	14.6	63.4	---	---	---
Cheddar cheese	Mil. lb.	.3	10.9	11.0	13.1	10.9	68.2	---	---	---
Nonfat dry milk	Mil. lb.	2.3	38.8	46.1	54.0	72.5	394.5	6.7	6.6	5.9
Evaporated milk	Mil. lb.	1.0	1.9	2.6	2.6	1.8	24.5	2.3	2.7	2.2
Total whole milk equivalent	Mil. lb.	35	254	458	418	412	2,036	5	6	5
Fluid sales, change from year earlier: 6/										
Whole milk	Pct.	-9.5	-.9	-.2	-1.5	+.2	-1.0	-2.2	-3.2	
Cream and cream mixtures	Pct.	-.9	+1.7	+4.5	+9.7	+.2	+5.1	+6.1	+.7	
Low-fat and skim milk	Pct.	+5.5	+10.4	+11.9	+9.8	+13.1	+9.9	+6.8	+7.4	
Total	Pct.	-5.5	+2.4	+3.4	+2.0	+4.0	+2.4	+.8	+.2	

1/ Seasonally adjusted price as percentage of parity price.
2/ Ice cream, ice milk, and sherbet.
3/ Includes manufactured products for which current monthly series are available.
4/ Natural, plus process American cheese held by CCC.
5/ Excludes cream and bulk condensed milk.
6/ Daily average sales in Federal and State Marketing areas.

FARM MILK PRICE RELATIONSHIPS—THE 1973-75 EXPERIENCE

by
James J. Miller
Agricultural Economist
Economic Research Service

ABSTRACT: During the rapid changes in farm milk prices during 1973-75, the prices paid for milk of different grades, uses, and in different regions adjusted at uneven rates but the basic relationships of these prices did not change. The Minnesota-Wisconsin price reflected changes in market conditions more rapidly than prices of manufacturing grade milk in other areas. The comparative prices paid by American cheese plants and butter-powder plants reflected changes in the relative sales strength of these products but moved back into a competitive position as production adjusted. The relationship of Grade A and manufacturing grade milk during 1973-75 was about the same as in 1969-72, as lower fluid utilization was offset by a wider difference between negotiated Class I prices and minimum Federal order Class I prices.

KEYWORDS: Dairy, milk, prices.

The 1973-75 period was one of unprecedented rises and falls in farm milk prices. Market conditions changed dramatically several times, ranging from short periods of heavy Government purchases under the price support program to periods of very tight supplies of manufactured products. Prices paid to farmers by plants and dealers for milk of different grades, uses, and in different regions did not adjust to changing market conditions uniformly. Comparisons of the various price series during the 1973-75 period and the fairly stable 1969-72 period, and a review of some of the basic, underlying price relationships provide a clearer picture of how the dairy markets adjusted to the sharp changes that occurred and may give insight into price patterns during future periods of sharp adjustment. Three important milk price relationships are: the Minnesota-Wisconsin manufacturing grade price compared with the U.S. average manufacturing grade price, the price of manufacturing grade milk used for butter and nonfat dry milk compared with that used for American cheese, and the price of milk eligible for fluid use compared with manufacturing grade milk.

Minnesota-Wisconsin and U.S. Manufacturing Grade Milk Prices[1]

The monthly Minnesota-Wisconsin (M-W) price for manufacturing grade milk during 1969-72 exceeded the U.S. average price for manufacturing grade milk by a fairly constant amount, when prices were adjusted to 3.5 percent milkfat.[2] This difference ranged between 3 and 16 cents per 100 pounds but was generally close to 10 cents (table 17). In early 1973, the difference was relatively large but still within the range of earlier years. As

[1]Minnesota and Wisconsin produce just over half of all manufacturing grade milk and therefore assume a weight of about one-half when the U.S. average is computed. The difference between the M-W price and the U.S. average manufacturing grade price can be used as a proxy for the difference between the M-W price and the average price in all other States, even though it is only around half as great.

[2]Prices were adjusted to a 3.5 percent milkfat basis using a differential equal to the Chicago wholesale butter price (92 score) times 0.12. This differential represents the difference between the value of 0.1 pound of milkfat and 0.1 pound of skim milk.

Table 17--Manufacturing grade milk price relationships

Year and month	Minnesota-Wisconsin	U.S. average	Difference	Milk used for American cheese	Milk used for butter and by-products	Difference
			Dollars per cwt. 1/			
1969-72 Average						
January	4.68	4.61	.07	4.63	4.54	.09
February	4.66	4.60	.06	4.63	4.56	.07
March	4.68	4.59	.09	4.64	4.53	.11
April	4.68	4.59	.09	4.61	4.57	.04
May	4.67	4.60	.07	4.59	4.57	.02
June	4.68	4.59	.09	4.61	4.57	.04
July	4.70	4.60	.10	4.61	4.59	.02
August	4.72	4.63	.09	4.63	4.61	.02
September	4.77	4.66	.11	4.68	4.64	.04
October	4.84	4.72	.12	4.76	4.68	.08
November	4.90	4.78	.12	4.85	4.72	.13
December	4.95	4.85	.10	4.90	4.78	.12
1973						
January	5.43	5.18	.25	5.37	5.28	.09
February	5.45	5.33	.12	5.39	5.29	.10
March	5.55	5.41	.14	5.50	5.38	.12
April	5.63	5.47	.16	5.56	5.44	.12
May	5.66	5.52	.14	5.59	5.47	.12
June	5.73	5.57	.16	5.65	5.48	.17
July	5.78	5.65	.13	5.69	5.56	.13
August	6.38	6.19	.19	6.25	6.21	.04
September	6.91	6.72	.19	6.81	6.74	.07
October	7.49	7.17	.32	7.32	7.07	.25
November	7.64	7.42	.22	7.60	7.32	.28
December	7.94	7.72	.22	7.89	7.56	.33
1974						
January	8.10	7.91	.19	8.07	7.76	.31
February	8.14	8.00	.14	8.17	7.89	.28
March	8.15	8.01	.14	8.18	7.84	.34
April	7.73	7.64	.09	7.74	7.60	.14
May	6.93	6.80	.13	6.85	6.73	.12
June	6.31	6.38	-.07	6.39	6.29	.10
July	6.29	6.30	-.01	6.23	6.28	-.05
August	6.39	6.42	-.03	6.36	6.41	-.05
September	6.69	6.67	.02	6.65	6.54	.11
October	6.82	6.81	.01	6.83	6.69	.14
November	6.76	6.75	.01	6.71	6.71	0
December	6.41	6.49	-.08	6.40	6.51	-.11
1975						
January	6.80	6.78	.02	6.76	6.80	-.04
February	6.85	6.85	0	6.82	6.84	-.02
March	6.86	6.86	0	6.85	6.80	.05
April	6.94	6.94	0	6.94	6.92	.02
May	7.02	6.98	.04	6.98	6.93	.05
June	7.11	7.05	.06	7.09	6.95	.14
July	7.35	7.26	.09	7.28	7.15	.13
August	7.70	7.56	.14	7.64	7.48	.16
September	8.27	8.06	.21	8.14	8.09	.05
October	8.60	8.45	.15	8.53	8.53	0
November	8.84	8.64	.20	8.71	8.77	-.06
December	9.08	8.87	.21	8.97	8.97	0

1/ Adjusted to 3.5 percent milkfat.

market conditions tightened in late 1973, the M-W price rose faster than the U.S. average, with a resultant widening of the difference until the October M-W price exceeded the U.S. average price by 32 cents. The average price then caught up, cutting the difference to a relatively typical 14 cents in March 1974. Then after additional imports were authorized, sharp drops in fluid sales and recovering milk production pushed more milk into manufacturing and stocks of dairy products mounted. When milk prices came down sharply in the spring of 1974, the M-W price fell faster and further. During June-August the M-W price was in the very unusual position of being below the U.S. average by as much as 7 cents. Then from September 1974 until April 1975, the two prices were virtually the same except for December 1974 when the M-W price once again fell below. The pattern typical of the 1969-72 period reasserted itself in late spring and summer of 1975 after stocks of dairy products were reduced to workable seasonal levels. When supplies tightened in late 1975, the M-W price once again rose faster than the U.S. average price although the difference did not widen quite as sharply as in late 1973.

There are several reasons why plants in Minnesota and Wisconsin have tended to pay above-average prices for manufacturing grade milk. While supplies of manufacturing grade milk are heaviest in these States, manufacturing activity is also heavily concentrated there. For example, these two States produced about 55 percent of the American cheese and about 45 percent of the butter in 1974. This concentration of both demand for milk for manufacturing and numbers of manufacturing operations tends to create a more competitive environment. In addition, concentration of supply lessens the procurement and assembly costs and also allows Wisconsin and Minnesota plants to realize greater economies of scale. Manufacturing plants in Minnesota and Wisconsin may well face relatively less seasonal milk supply variation than plants handling manufacturing grade milk in other regions. The degree of variation in milk supplies has a strong impact on plant efficiency.

There has been a fairly strong correlation between cheese prices and the M-W price in recent years, especially during 1969-72. However, this seems to be more indicative of the relationship of the cheese market to the demand for manufacturing milk as a whole rather than of a specific regional impact. The level of cheese prices has not seemed to affect the M-W price much differently than it has the average U.S. manufacturing price. When the difference between the M-W price and the U.S. average price first exceeded the range of earlier years, during August-September 1973, American cheese plants nationally were paying only slightly more than butter-powder plants. In fact, the pay-price advantage of cheese plants was the lowest of any time during the first 9 months of 1973. During September-December 1975, the average prices paid by cheese and butter-powder plants were almost identical but the difference between the M-W and the U.S. average price was almost double the level typical of the 1969-72 period. On the other hand, although cheese plants paid considerably more during late 1969 and early 1970, the M-W price maintained its typical relationship with the U.S. average price.

Despite the great variation shown during 1973-75 in the difference between the M-W price and the U.S. manufacturing grade milk price, the basic relationship between the average prices in these two States and in other areas did not appear to change greatly. During periods when market conditions were fairly well stabilized, this difference generally was within the range of the 1969-72 period. In fact, the average difference was 11 cents during the 1973-75 period compared with 9 cents during the 1969-72 period. The 1973-75 period did illustrate that prices paid for manufacturing grade milk in Minnesota and Wisconsin reacted more quickly to changing market conditions than did the average for all other areas. This reflects what is probably a more competitive environment in these two States. In addition, this area holds the major amounts of reserve Grade A milk, so that out-of-State shipments and the resulting amounts of milk left for manufacturing quickly reflect market conditions in other areas as well as local conditions. Another reason for slower price response in other areas may be related to the cost structure in their processing plants. Since manufacturing plants outside Minnesota and Wisconsin generally operate at a lower proportion of capacity during most months of the year, changes in the quantity of milk available for manufacturing have a greater impact on per-unit cost in those areas than is true in Minnesota and Wisconsin.

If market conditions in the future change abruptly, it is likely that the M-W price will adjust more rapidly and the difference between the M-W price and the U.S. average price for manufacturing grade milk will again exhibit wide variation. However, the basic price relationship will be affected primarily by long-run cost trends rather than short-run market conditions. Except for short periods, the difference between the M-W price and the U.S. average price may continue to be close to the levels typical of the 1969-72 period since no trend in this price relationship is discernible.

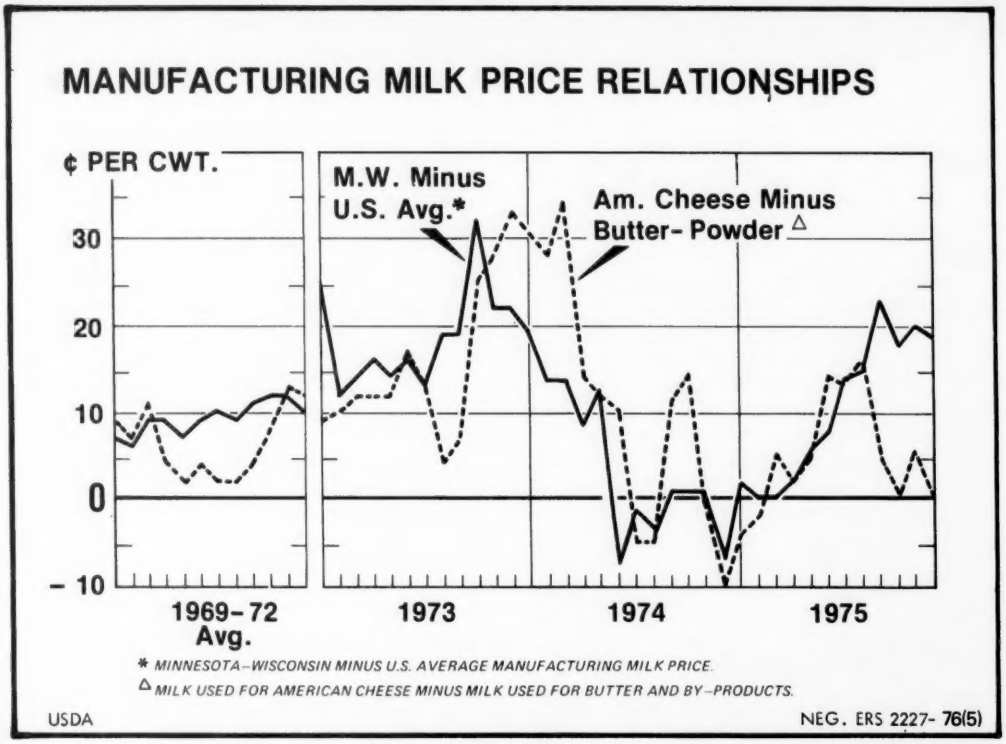

Figure 12

Prices Paid by Butter-Powder and American Cheese Plants

The price of milk used for manufacturing is generally determined by the prices paid by American cheese and butter-powder plants, since these products represent the marginal uses of milk and have accounted for more than 60 percent of all milk used in manufacturing in recent years. In the long run, both types of plants tend to pay close to the same amount for milk as the mix of products adjusts to market conditions. However, the difference may be substantial at any particular time, reflecting the relationships of product prices (figure 12).

In recent years, American cheese plants have tended to pay slightly more than butter-powder plants for milk of equivalent fat test. In order to meet the generally rising demand for cheese, American cheese plants have had to pay slightly more to attract the necessary milk supplies. During 1969-72, American cheese plants paid more than butter-powder plants about three-fourths of the time. The difference ranged from 23 cents above to 3 cents below the butter-powder pay price and averaged 6.5 cents above.

During the first half of 1973, cheese plants paid about a dime more as cheese sales increased while milk supplies declined. This advantage actually narrowed somewhat during August-September 1973 when prices of all dairy products started to rise sharply. After wholesale butter prices peaked in late September, the pay advantage swung sharply to American cheese. Riding the crest of strong sales, American cheese plants paid at least 25 cents more from October 1973 until March 1974; the greatest difference was 34 cents in March 1974. This difference was sufficient to draw as much milk into cheese as the cheesemakers desired, even though the actual advantage of American cheese plants (based on wholesale product prices) was considerably greater. When American cheese prices started to decline and nonfat dry milk prices peaked in April 1974, the pay advantage of cheese plants fell to 14 cents and stayed at about a dime until all products had dropped to CCC's support purchase prices.

During the second half of 1974 and in 1975, both types of operations remained fairly close with the advantage swinging back and forth. American cheese plants paid more in 9 months and butter-powder plants more in 6 months. Even though butter sales were very strong while cheese sales were weak during the first half of 1975, heavy supplies kept dairy product prices at support levels so

no major advantage could be gained. As supplies of milk available for manufacturing tightened during the second half of 1975, output of these dairy products was adjusted to keep pay prices fairly well in line.

Differences in the prices paid by butter-powder and cheese plants serve the essential market function of allocating available supplies of milk. As long as capacity in neither sector is strained, sharp advantages are unlikely to be maintained for very long. If relatively strong cheese demand continues to draw increasing proportions of total milk available for manufacturing into cheese production, American cheese operations likely will tend to pay slightly more. However, the large increase in cheese capacity during 1974 will help to prevent very sharp advantages. The trend toward increased flexibility between products, especially where it exists within the same organization, means that sizable quantities of milk can be shifted from one type of operation to the other on very short notice. This allows wholesale dairy product markets to adjust to market conditions more rapidly and to hold pay prices closer together in the absence of policies favoring one type of production.

Milk Eligible for Fluid Use and Manufacturing Grade Milk Prices

The relationship between the prices of milk eligible for fluid use (Grade A in most States) and manufacturing grade milk is fairly stable, since the vast bulk of milk going into fluid use (Class I) is subject to minimum prices set under the Federal order markets or State agencies which generally are tied to manufacturing grade milk prices (primarily the M-W price) (figure 13). Two major factors can vary the relationship of Grade A and Grade B milk prices. The first is the difference between the Class I prices negotiated by dairy cooperatives (which may include charges for additional services) and the minimum Class I prices. Secondly, changes in the percentage of Grade A milk going into fluid use also are important. At least in the short run, these two factors may be partially offsetting. The actual difference between the prices of the grades at any time can be greatly affected by the fact that Class I prices do not adjust as rapidly as manufacturing grade milk prices. In Federal order markets, minimum Class I prices have been based on the M-W price in the second preceding month since February 1972.

The difference between Grade A and Grade B milk prices during 1969-72 followed a fairly stable pattern of lows during the low fluid utilization months of the flush season and highs during the high fluid utilization months of fall. The average difference by months ranged from $1.12 per 100 pounds in June to $1.50 in September and the difference was never lower than $1.08 nor higher than $1.57 (table 18).

As manufacturing grade milk prices moved up sharply in late 1973, the difference between Grade A and manufacturing milk prices was held to very low seasonal levels. Although it peaked in September as usual, its peak of $1.20 was about 30 cents below the 1969-72 September average. As prices fell sharply in the spring of 1974, the situation was almost completely reversed. The difference widened greatly during the summer of 1974, reaching $1.81 per hundred pounds in May compared with a 1969-72 average of $1.16. However, the differences remained wide during the fall of 1974, although they moved closer to typical seasonal levels. By the summer of 1975, the differentials had returned to seasonal levels very similar to the levels of 1969-72, before narrowing once more during the fall of 1975 as prices rose sharply. Even though the difference was at low seasonal levels in late 1975, it generally was not as low as in the fall of 1973.

Although the Class I differentials and the lag in determining Class I prices tend to be predominant factors in the difference between the prices of the two grades of milk, there have been changes in some of the underlying factors. The percentage of Grade A milk used for fluid products was lower in 1973-75 than during 1969-72. This was primarily the result of an increasing proportion of total milk production that was eligible for fluid use. For example, the 1975 Class I utilization percentage in Federal order markets fell from 1974, even though fluid sales were up and total milk production was virtually unchanged. The decline in utilization percentage was caused by increased producer deliveries under the orders as Grade B producers, especially in the Upper Midwest, converted to Grade A production. A lower Class I utilization percentage has the effect of narrowing the relationship between Grade A and manufacturing grade milk.

The second major area of change has been in the prevalence of negotiated Class I prices and the amount by which they exceed minimum Class I prices. While "over-order" payments partially represent charges for procurement, assembly, and balancing functions in many instances, at least some of the payment is reflected in higher farm milk prices. Negotiated Class I prices change less frequently than the minimum prices. When prices rise sharply, these payments tend to narrow and they widen when prices fall sharply. One reason for this is the desire of processors and retailers to maintain as stable retail prices as possible. Rising transportation costs also affect the relationship of

Table 18--Farm milk prices

Year and month	Milk eligible for fluid use	Manufacturing grade	Difference	All milk sold to plants and dealers	Manufacturing grade	Difference
	Dollars per cwt.					
1969-72 Average						
January	6.23	4.82	1.41	5.88	4.82	1.06
February	6.19	4.77	1.42	5.84	4.77	1.07
March	6.06	4.72	1.34	5.72	4.72	1.00
April	5.93	4.70	1.23	5.61	4.70	.91
May	5.82	4.66	1.16	5.50	4.66	.84
June	5.74	4.62	1.12	5.43	4.62	.81
July	5.87	4.63	1.24	5.53	4.63	.90
August	6.03	4.68	1.35	5.68	4.68	1.00
September	6.29	4.79	1.50	5.93	4.79	1.14
October	6.43	4.95	1.48	6.09	4.95	1.14
November	6.51	5.05	1.46	6.18	5.05	1.13
December	6.48	5.10	1.38	6.17	5.10	1.07
1973						
January	6.84	5.52	1.32	6.56	5.52	1.04
February	6.90	5.52	1.38	6.60	5.52	1.08
March	6.83	5.57	1.26	6.54	5.57	.97
April	6.68	5.59	1.09	6.43	5.59	.84
May	6.67	5.60	1.07	6.40	5.60	.80
June	6.68	5.61	1.07	6.40	5.61	.79
July	6.85	5.72	1.13	6.57	5.72	.85
August	7.45	6.29	1.16	7.19	6.29	.90
September	8.13	6.93	1.20	7.87	6.93	.94
October	8.55	7.45	1.10	8.32	7.45	.87
November	8.89	7.76	1.13	8.66	7.76	.90
December	9.02	8.00	1.02	8.80	8.00	.80
1974						
January	9.09	8.13	.96	8.89	8.13	.76
February	9.13	8.15	.98	8.92	8.15	.77
March	9.19	8.14	1.05	8.96	8.14	.82
April	9.16	7.75	1.41	8.84	7.75	1.09
May	8.68	6.87	1.81	8.26	6.87	1.39
June	8.10	6.42	1.68	7.69	6.42	1.27
July	8.00	6.31	1.69	7.62	6.31	1.31
August	8.10	6.46	1.64	7.75	6.46	1.29
September	8.40	6.81	1.59	8.08	6.81	1.27
October	8.67	7.03	1.64	8.35	7.03	1.32
November	8.83	7.02	1.81	8.49	7.02	1.47
December	8.63	6.74	1.89	8.27	6.74	1.53
1975						
January	8.73	7.00	1.73	8.37	7.00	1.37
February	8.67	7.04	1.63	8.32	7.04	1.28
March	8.50	7.02	1.48	8.18	7.02	1.16
April	8.45	7.07	1.38	8.14	7.07	1.07
May	8.32	7.07	1.25	8.03	7.07	.96
June	8.24	7.10	1.14	7.97	7.10	.87
July	8.50	7.30	1.20	8.23	7.30	.93
August	8.87	7.62	1.25	8.60	7.62	.98
September	9.47	8.24	1.23	9.22	8.24	.98
October	9.91	8.75	1.16	9.69	8.75	.94
November	10.20	8.99	1.21	9.99	8.99	1.00
December	10.50	9.25	1.25	10.30	9.25	1.05

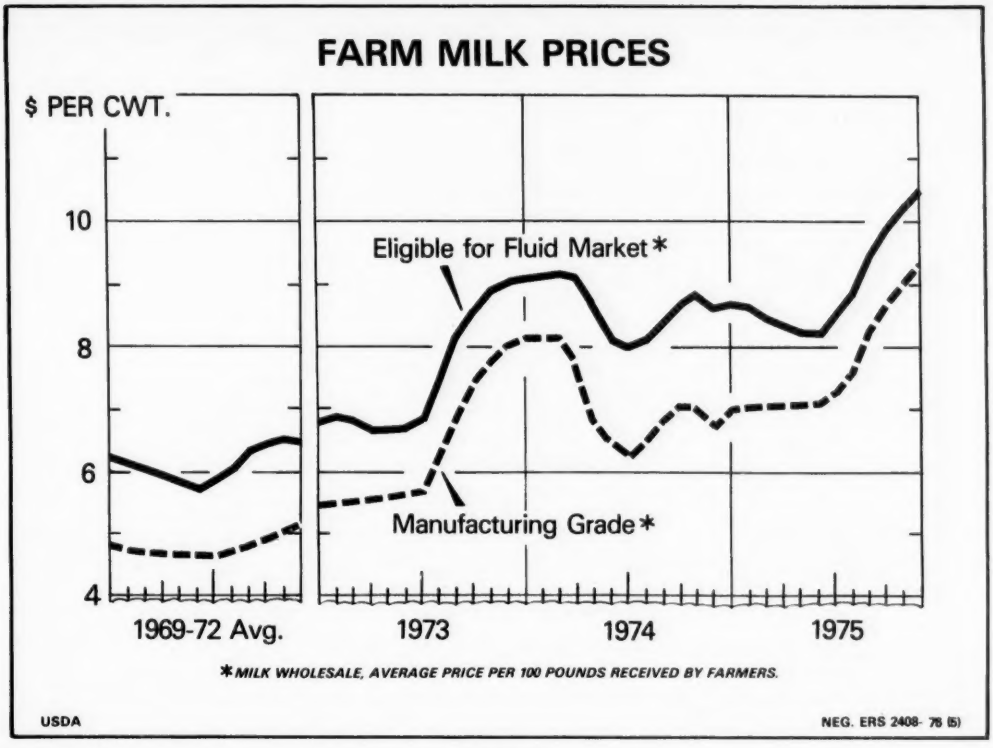

Figure 13

prevailing Class I prices and manufacturing grade milk. As it becomes more expensive to ship milk from the heavy surplus regions of the Upper Midwest to distant markets, the relative value of milk produced in those distant markets increases. Much of this increased value is reflected in higher local prices and tends to widen the relationship between the national average Grade A price and manufacturing grade milk prices. In recent years, cooperatives have tended to undertake an increasing proportion of the procurement, assembly, and balancing of fluid milk supplies for entire markets or areas. Any efficiencies due to this coordination likely are reflected in higher farm milk prices.

The difference between Grade A and manufacturing milk prices was at seasonal levels comparable to the 1969-72 period during mid-1975, when the dairy markets were in a relatively stable condition. This indicates that the relationship between the two grades may not have changed substantially. However, the two major factors determining the relationship have changed with the increased differential between prevailing Class I prices and manufacturing grade milk prices being offset by lower fluid utilization.

The relationship between manufacturing grade milk prices and the average price of all milk sold to plants and dealers is strictly a statistical relationship since the all-milk price represents milk in all uses. However, this difference is worthy of note due to the frequency with which the all-milk price is used. During 1969-72, this difference averaged about $1.00, with an average seasonal range of 81 cents during June to $1.14 during September-October. This differential has widened slightly in recent years as the proportion of Grade A milk has increased since the price relationship between Grade A and Grade B milk has not changed.

SUMMARY AND CONCLUSIONS

Even though the dairy pricing structure had to adjust to several dramatic turnarounds in market conditions during 1973-75, the underlying economic price relationships were not significantly altered from the 1969-72 period. These relationships may be changing but if so, they have been so gradual that thay are not yet apparent.

What was clearly evident during 1973-75 was that the various segments of the milk pricing structure do not adjust at an even rate to sharp changes in market conditions. At any point in time, producers in different regions or of different grades of milk do not equally share the gains or losses. How-

ever, the relative positions tend to reverse themselves before complete adjustment is made. In addition, dairy prices appeared to adjust more evenly to the tight supply conditions of late 1975 than the similar conditions of late 1973. Although other factors probably were important, adjustment in late 1975 likely was made smoother by the experience gained during late 1973 and early 1974

If milk supplies and demand remain closely in balance in the future, the chances of rapid price changes are considerable. Since both supply and demand for dairy products are quite inelastic, small changes in production or demand, triggered by random events or forces external to the dairy industry, can have substantial price impacts. Recent years indicate, however, that these short-run adjustments do not necessarily change basic price relationships.

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